

«alpha»-Pinene

Other names:

(-)-.alpha.-pinene
(-)-.beta.-pinene
(-)-2-pinene
(.+-.)-.alpha.-pinene
(.+-.)-2-pinene
(.+-.)-«alpha»-Pinene
(.+-.)-Â«alphaÂ»-Pinene
(1S)-(-)-.alpha.-pinene
(1S)-(-)-.beta.-pinene
(1S)-2,6,6-trimethylbicyclo[3.1.1]hept-2-ene
(1S,5S)-(-)-.alpha.-pinene
(1S,5S)-6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane
(S)-(-)-.alpha.-pinene
(S)-2-pinene
.alpha.-pinene
.alpha.-pinene, (1S)-(-)-
2,6,6-Trimethylbicyclo(3.1.1)-2-hept-2-ene
2,6,6-Trimethylbicyclo[3.1.1]-2-heptene
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene
2,6,6-trimethylbicyclo-[3,1,1]-2-heptene («alpha»-pinene)
2,6,6-trimethylbicyclo-[3,1,1]-2-heptene (Â«alphaÂ»-pinene)
2,6,6-trimethylbicyclo[3,1,1]-heptene («alpha»-pinene)
2,6,6-trimethylbicyclo[3,1,1]-heptene (Â«alphaÂ»-pinene)
2-Pinene
2-pinene, (1S,5S)-(-)-
4,6,6-Trimethylbicyklo(3,1,1)hept-3-en
Acintene A
Bicyclo[3.1.1]hept-2-ene, 2,6,6-trimethyl-
Bicyclo[3.1.1]hept-2-ene, 2,6,6-trimethyl-, (.+-.)-
NSC 7727
PC 500
Pinene
Pinene, «alpha»
Pinene, Â«alphaÂ»
Sylvapine A
UN 2368
alpha-Pinene
bicyclo[3.1.1]hept-2-ene, 2,6,6-trimethyl-, (1S)-
l-.alpha.-pinene
pin-2(3)-ene

Inchi: InChI=1S/C10H16/c1-7-4-5-8-6-9(7)10(8,2)3/h4,8-9H,5-6H2,1-3H3
InchiKey: GRWFGVWFFZKLTU-UHFFFAOYSA-N
Formula: C10H16
SMILES: CC1=CCC2CC1C2(C)C
Mol. weight [g/mol]: 136.23
CAS: 80-56-8

Physical Properties

Property code	Value	Unit	Source
chl	-6205.30 ± 2.90	kJ/mol	NIST Webbook
gf	149.85	kJ/mol	Joback Method
hf	-69.08	kJ/mol	Joback Method
hfus	11.43	kJ/mol	Joback Method
hvap	44.60 ± 0.10	kJ/mol	NIST Webbook
hvap	45.40	kJ/mol	NIST Webbook
ie	8.07	eV	NIST Webbook
log10ws	-2.93		Crippen Method
logp	2.999		Crippen Method
mcpol	125.740	ml/mol	McGowan Method
pc	2890.51	kPa	Joback Method
rinpol	931.00		NIST Webbook
rinpol	914.00		NIST Webbook
rinpol	917.00		NIST Webbook
rinpol	921.00		NIST Webbook
rinpol	925.00		NIST Webbook
rinpol	940.70		NIST Webbook
rinpol	952.00		NIST Webbook
rinpol	950.00		NIST Webbook
rinpol	948.55		NIST Webbook
rinpol	969.00		NIST Webbook
rinpol	943.00		NIST Webbook
rinpol	963.00		NIST Webbook
rinpol	924.00		NIST Webbook
rinpol	945.00		NIST Webbook
rinpol	915.00		NIST Webbook
rinpol	944.00		NIST Webbook
rinpol	940.00		NIST Webbook
rinpol	935.00		NIST Webbook
rinpol	941.00		NIST Webbook
rinpol	937.00		NIST Webbook

rinpol	929.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	953.00	NIST Webbook
rinpol	907.00	NIST Webbook
rinpol	976.00	NIST Webbook
rinpol	912.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	947.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	967.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	950.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	945.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	946.00	NIST Webbook
rinpol	948.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	932.00	NIST Webbook

rinpol	939.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	950.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	943.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	943.50	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	923.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	977.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	951.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	924.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	923.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	939.00	NIST Webbook

rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	982.00	NIST Webbook
rinpol	936.50	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	949.00	NIST Webbook
rinpol	919.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	949.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	924.00	NIST Webbook
rinpol	943.00	NIST Webbook
rinpol	943.00	NIST Webbook
rinpol	924.00	NIST Webbook
rinpol	924.00	NIST Webbook
rinpol	939.00	NIST Webbook

rinpol	936.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	924.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	919.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	916.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	949.50	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	944.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	921.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	944.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook

rinpol	949.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	949.00	NIST Webbook
rinpol	914.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	914.00	NIST Webbook
rinpol	921.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	944.00	NIST Webbook
rinpol	917.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	921.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	944.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	930.00	NIST Webbook

rinpol	945.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	921.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	943.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	980.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	925.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	918.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	935.00	NIST Webbook

rinpol	930.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	922.00	NIST Webbook
rinpol	922.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	948.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	956.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	956.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	944.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	920.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	939.00	NIST Webbook

rinpol	931.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	923.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	969.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	927.00	NIST Webbook

rinpol	938.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	943.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	963.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	976.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	947.00	NIST Webbook
rinpol	947.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	936.00	NIST Webbook

rinpol	936.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	943.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	925.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	967.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	953.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	924.00	NIST Webbook
rinpol	923.00	NIST Webbook
rinpol	923.00	NIST Webbook
rinpol	922.00	NIST Webbook
rinpol	931.02	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	928.00	NIST Webbook

rinpol	940.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	944.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	944.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	968.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	936.50	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	925.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	921.00	NIST Webbook
rinpol	917.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	944.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	920.00	NIST Webbook

rinpol	940.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	925.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	924.00	NIST Webbook
rinpol	943.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	944.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	943.00	NIST Webbook

rinpol	936.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	918.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	946.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	945.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	913.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	924.00	NIST Webbook
rinpol	912.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	945.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	943.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	939.00	NIST Webbook

rinpol	937.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	918.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	949.00	NIST Webbook
rinpol	919.00	NIST Webbook
rinpol	923.00	NIST Webbook
rinpol	943.50	NIST Webbook
rinpol	946.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	967.00	NIST Webbook
rinpol	939.70	NIST Webbook
rinpol	918.00	NIST Webbook
rinpol	922.00	NIST Webbook
rinpol	940.90	NIST Webbook
rinpol	965.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	925.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	948.55	NIST Webbook
rinpol	948.81	NIST Webbook
rinpol	955.92	NIST Webbook
rinpol	956.48	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	945.00	NIST Webbook
rinpol	949.00	NIST Webbook
rinpol	952.00	NIST Webbook
rinpol	956.00	NIST Webbook
rinpol	959.00	NIST Webbook
rinpol	935.00	NIST Webbook

rinpol	938.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	940.90	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	950.00	NIST Webbook
rinpol	952.00	NIST Webbook
rinpol	956.00	NIST Webbook
rinpol	960.00	NIST Webbook
rinpol	965.00	NIST Webbook
rinpol	952.00	NIST Webbook
rinpol	956.00	NIST Webbook
rinpol	960.00	NIST Webbook
rinpol	965.00	NIST Webbook
rinpol	948.00	NIST Webbook
rinpol	940.70	NIST Webbook
rinpol	940.50	NIST Webbook
rinpol	950.50	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	970.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	944.50	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	962.00	NIST Webbook
rinpol	917.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	917.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	945.00	NIST Webbook
rinpol	945.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	939.00	NIST Webbook

rinpol	939.00	NIST Webbook
rinpol	917.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	944.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	924.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	925.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	943.00	NIST Webbook
rinpol	944.00	NIST Webbook
rinpol	943.50	NIST Webbook
rinpol	953.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	928.00	NIST Webbook

rinpol	938.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	910.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	934.00	NIST Webbook

rinpol	942.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	909.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	910.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	953.00	NIST Webbook
rinpol	909.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	961.00	NIST Webbook
rinpol	951.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	921.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	939.00	NIST Webbook

rinpol	934.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	924.00	NIST Webbook
rinpol	923.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	959.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	943.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	938.00	NIST Webbook

rinpol	939.00	NIST Webbook
rinpol	946.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	939.70	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	947.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	954.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	913.00	NIST Webbook
rinpol	934.00	NIST Webbook

rinpol	936.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	946.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	946.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	939.50	NIST Webbook
rinpol	943.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	946.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	924.00	NIST Webbook
rinpol	922.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	956.00	NIST Webbook
rinpol	925.00	NIST Webbook
rinpol	910.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	948.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	930.00	NIST Webbook

rinpol	939.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	910.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	925.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	923.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	924.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	939.00	NIST Webbook

rinpol	935.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	914.00	NIST Webbook
rinpol	925.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	954.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	918.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	922.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	936.00	NIST Webbook

rinpol	939.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	924.20	NIST Webbook
rinpol	924.30	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	925.00	NIST Webbook
rinpol	940.90	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	921.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	931.00	NIST Webbook

rinpol	907.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	947.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	965.00	NIST Webbook
rinpol	925.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	934.08	NIST Webbook
rinpol	934.63	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	925.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	925.00	NIST Webbook
rinpol	925.00	NIST Webbook

rinpol	925.00	NIST Webbook
rinpol	925.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	937.80	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	925.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	943.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	923.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	925.00	NIST Webbook
rinpol	936.60	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	926.60	NIST Webbook
rinpol	926.60	NIST Webbook
rinpol	926.70	NIST Webbook
rinpol	925.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	933.00	NIST Webbook

rinpol	934.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	963.00	NIST Webbook
rinpol	968.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	912.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	944.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	946.00	NIST Webbook

rinpol	929.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	975.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	955.02	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	945.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	928.00	NIST Webbook

rinpol	927.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	980.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	944.00	NIST Webbook
rinpol	943.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	925.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	923.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	921.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	947.00	NIST Webbook
rinpol	956.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	939.00	NIST Webbook

rinpol	938.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	920.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	925.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	943.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	944.00	NIST Webbook
rinpol	920.00	NIST Webbook

rinpol	935.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	945.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	910.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	986.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	921.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	944.00	NIST Webbook
rinpol	912.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	935.00	NIST Webbook

rinpol	930.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	957.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	976.00	NIST Webbook
rinpol	954.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	907.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	913.00	NIST Webbook
rinpol	978.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	914.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	953.00	NIST Webbook
rinpol	952.00	NIST Webbook
rinpol	953.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	907.00	NIST Webbook

rinpol	941.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	918.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	923.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	937.00	NIST Webbook

rinpol	942.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	918.00	NIST Webbook
rinpol	913.00	NIST Webbook
rinpol	945.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	918.00	NIST Webbook
rinpol	938.00	NIST Webbook

rinpol	933.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	943.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	943.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	924.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	944.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	957.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	939.00	NIST Webbook

rinpol	933.00	NIST Webbook
rinpol	944.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	953.00	NIST Webbook
rinpol	923.00	NIST Webbook
rinpol	922.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	916.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	939.00	NIST Webbook

rinpol	929.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	916.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	918.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	924.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	916.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	946.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	952.00	NIST Webbook
rinpol	912.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	911.00	NIST Webbook
rinpol	915.00	NIST Webbook
rinpol	939.00	NIST Webbook

rinpol	930.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	933.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	938.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	927.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	930.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	941.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	931.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	944.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	940.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	942.00	NIST Webbook
rinpol	944.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	962.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	934.00	NIST Webbook

rinpol	936.00	NIST Webbook
rinpol	944.00	NIST Webbook
rinpol	934.00	NIST Webbook
rinpol	920.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	939.00	NIST Webbook
rinpol	936.00	NIST Webbook
rinpol	935.00	NIST Webbook
rinpol	932.00	NIST Webbook
rinpol	953.00	NIST Webbook
rinpol	937.00	NIST Webbook
rinpol	926.00	NIST Webbook
rinpol	929.00	NIST Webbook
rinpol	928.00	NIST Webbook
rinpol	926.60	NIST Webbook
ripol	1061.00	NIST Webbook
ripol	1042.00	NIST Webbook
ripol	1049.70	NIST Webbook
ripol	1036.70	NIST Webbook
ripol	1046.60	NIST Webbook
ripol	1039.00	NIST Webbook
ripol	1000.00	NIST Webbook
ripol	1040.00	NIST Webbook
ripol	1012.00	NIST Webbook
ripol	1016.10	NIST Webbook
ripol	1005.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1039.00	NIST Webbook
ripol	1027.00	NIST Webbook
ripol	1046.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1010.00	NIST Webbook
ripol	1033.00	NIST Webbook
ripol	1035.00	NIST Webbook
ripol	1050.00	NIST Webbook
ripol	1043.00	NIST Webbook
ripol	1016.00	NIST Webbook
ripol	1045.00	NIST Webbook
ripol	1014.00	NIST Webbook
ripol	1031.00	NIST Webbook
ripol	1026.00	NIST Webbook
ripol	1017.00	NIST Webbook
ripol	1007.00	NIST Webbook
ripol	1029.00	NIST Webbook

ripol	1013.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1008.00	NIST Webbook
ripol	1056.00	NIST Webbook
ripol	1036.00	NIST Webbook
ripol	1015.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1028.00	NIST Webbook
ripol	1025.00	NIST Webbook
ripol	1024.00	NIST Webbook
ripol	1023.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1071.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1042.00	NIST Webbook
ripol	1035.00	NIST Webbook
ripol	1039.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1011.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1010.00	NIST Webbook
ripol	1018.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1015.00	NIST Webbook
ripol	1017.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1028.00	NIST Webbook
ripol	1025.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1028.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1013.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook

ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1031.00	NIST Webbook
ripol	1010.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1025.00	NIST Webbook
ripol	1045.00	NIST Webbook
ripol	1016.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1045.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1035.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1010.00	NIST Webbook
ripol	1039.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1008.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1012.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1001.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1039.00	NIST Webbook
ripol	1016.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook

ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1076.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1007.00	NIST Webbook
ripol	1007.00	NIST Webbook
ripol	1007.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1031.00	NIST Webbook
ripol	1075.00	NIST Webbook
ripol	1017.00	NIST Webbook
ripol	1010.00	NIST Webbook
ripol	1014.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1027.00	NIST Webbook
ripol	1007.00	NIST Webbook
ripol	1019.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1076.00	NIST Webbook
ripol	1037.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1075.00	NIST Webbook
ripol	1072.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1026.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1020.00	NIST Webbook

ripol	1015.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1052.00	NIST Webbook
ripol	1042.00	NIST Webbook
ripol	1042.00	NIST Webbook
ripol	1040.00	NIST Webbook
ripol	1040.00	NIST Webbook
ripol	1039.00	NIST Webbook
ripol	1043.00	NIST Webbook
ripol	1043.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1039.00	NIST Webbook
ripol	1003.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1015.00	NIST Webbook
ripol	1012.00	NIST Webbook
ripol	1034.00	NIST Webbook
ripol	1033.00	NIST Webbook
ripol	1012.00	NIST Webbook
ripol	1037.00	NIST Webbook
ripol	1016.10	NIST Webbook
ripol	1019.00	NIST Webbook
ripol	1039.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1036.00	NIST Webbook
ripol	1013.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1033.00	NIST Webbook
ripol	989.00	NIST Webbook
ripol	1028.00	NIST Webbook
ripol	1018.00	NIST Webbook
ripol	1031.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1028.00	NIST Webbook
ripol	1028.00	NIST Webbook
ripol	1023.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1038.00	NIST Webbook

ripol	1038.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1033.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1018.00	NIST Webbook
ripol	1037.00	NIST Webbook
ripol	1023.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1033.00	NIST Webbook
ripol	1019.00	NIST Webbook
ripol	1036.00	NIST Webbook
ripol	1019.00	NIST Webbook
ripol	1024.00	NIST Webbook
ripol	1028.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1026.00	NIST Webbook
ripol	1017.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1005.00	NIST Webbook
ripol	1010.00	NIST Webbook
ripol	1009.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1060.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1007.00	NIST Webbook
ripol	1046.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1035.00	NIST Webbook
ripol	1011.00	NIST Webbook
ripol	1037.00	NIST Webbook

ripol	1025.00	NIST Webbook
ripol	1037.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1056.00	NIST Webbook
ripol	1009.00	NIST Webbook
ripol	1017.00	NIST Webbook
ripol	1039.00	NIST Webbook
ripol	1033.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1023.00	NIST Webbook
ripol	1015.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1039.00	NIST Webbook
ripol	1039.00	NIST Webbook
ripol	1028.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1037.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1018.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1033.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1028.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1027.00	NIST Webbook
ripol	1027.00	NIST Webbook
ripol	1027.00	NIST Webbook
ripol	1019.00	NIST Webbook
ripol	1071.00	NIST Webbook
ripol	1014.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1028.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1025.00	NIST Webbook
ripol	1025.00	NIST Webbook
ripol	1025.00	NIST Webbook
ripol	1015.00	NIST Webbook
ripol	1048.00	NIST Webbook
ripol	1036.00	NIST Webbook
ripol	1042.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1046.00	NIST Webbook
ripol	1012.00	NIST Webbook

ripol	1019.00	NIST Webbook
ripol	1017.00	NIST Webbook
ripol	1011.00	NIST Webbook
ripol	1014.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1012.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1007.00	NIST Webbook
ripol	1031.00	NIST Webbook
ripol	1016.00	NIST Webbook
ripol	1039.00	NIST Webbook
ripol	1019.00	NIST Webbook
ripol	1013.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1010.00	NIST Webbook
ripol	1022.50	NIST Webbook
ripol	1013.00	NIST Webbook
ripol	1026.00	NIST Webbook
ripol	1039.00	NIST Webbook
ripol	1033.00	NIST Webbook
ripol	1015.00	NIST Webbook
ripol	1039.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1033.00	NIST Webbook
ripol	1033.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1031.00	NIST Webbook
ripol	1045.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1024.00	NIST Webbook
ripol	1002.00	NIST Webbook
ripol	1022.00	NIST Webbook
ripol	1034.00	NIST Webbook
ripol	1035.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1026.00	NIST Webbook
ripol	1042.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1025.00	NIST Webbook
ripol	1016.00	NIST Webbook

ripol	1021.00	NIST Webbook
ripol	1017.00	NIST Webbook
ripol	1024.00	NIST Webbook
ripol	1024.00	NIST Webbook
ripol	1025.00	NIST Webbook
ripol	1024.00	NIST Webbook
ripol	1027.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1012.00	NIST Webbook
ripol	1017.00	NIST Webbook
ripol	1014.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1033.00	NIST Webbook
ripol	1027.00	NIST Webbook
ripol	1025.00	NIST Webbook
ripol	1042.00	NIST Webbook
ripol	1023.00	NIST Webbook
ripol	1035.00	NIST Webbook
ripol	1026.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1034.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1016.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1035.00	NIST Webbook
ripol	1027.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1052.00	NIST Webbook
ripol	1050.00	NIST Webbook
ripol	1050.00	NIST Webbook
ripol	1035.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1008.00	NIST Webbook
ripol	1017.00	NIST Webbook
ripol	1022.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1022.00	NIST Webbook
ripol	1015.00	NIST Webbook
ripol	1043.00	NIST Webbook
ripol	1018.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1037.00	NIST Webbook
ripol	1022.00	NIST Webbook

ripol	1016.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1016.00	NIST Webbook
ripol	1022.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1007.00	NIST Webbook
ripol	1024.00	NIST Webbook
ripol	1010.00	NIST Webbook
ripol	1022.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1013.00	NIST Webbook
ripol	1006.00	NIST Webbook
ripol	1023.00	NIST Webbook
ripol	1000.00	NIST Webbook
ripol	1037.00	NIST Webbook
ripol	1000.00	NIST Webbook
ripol	1018.00	NIST Webbook
ripol	1012.00	NIST Webbook
ripol	1023.00	NIST Webbook
ripol	1022.00	NIST Webbook
ripol	1015.00	NIST Webbook
ripol	1008.00	NIST Webbook
ripol	1011.00	NIST Webbook
ripol	1009.00	NIST Webbook
ripol	1023.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1012.00	NIST Webbook
ripol	1017.00	NIST Webbook
ripol	1010.00	NIST Webbook
ripol	1012.00	NIST Webbook
ripol	1014.00	NIST Webbook
ripol	1015.00	NIST Webbook
ripol	1005.00	NIST Webbook
ripol	1019.00	NIST Webbook
ripol	1045.00	NIST Webbook
ripol	1034.00	NIST Webbook
ripol	1034.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1041.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1028.00	NIST Webbook

ripol	1017.00	NIST Webbook
ripol	1015.00	NIST Webbook
ripol	1014.00	NIST Webbook
ripol	1025.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1008.00	NIST Webbook
ripol	1014.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1016.00	NIST Webbook
ripol	1031.00	NIST Webbook
ripol	1022.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1023.00	NIST Webbook
ripol	1026.00	NIST Webbook
ripol	1014.00	NIST Webbook
ripol	1014.00	NIST Webbook
ripol	1026.00	NIST Webbook
ripol	1014.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1008.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1017.00	NIST Webbook
ripol	1039.00	NIST Webbook
ripol	1025.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1041.00	NIST Webbook
ripol	1022.00	NIST Webbook
ripol	1024.00	NIST Webbook
ripol	1012.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1008.00	NIST Webbook
ripol	1029.00	NIST Webbook

ripol	1038.00	NIST Webbook
ripol	1019.00	NIST Webbook
ripol	1024.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1015.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1012.00	NIST Webbook
ripol	1011.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1019.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1008.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1016.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1007.00	NIST Webbook
ripol	1008.00	NIST Webbook
ripol	1033.00	NIST Webbook
ripol	1027.00	NIST Webbook
ripol	1017.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1034.00	NIST Webbook
ripol	1028.00	NIST Webbook
ripol	1025.00	NIST Webbook
ripol	1010.00	NIST Webbook
ripol	1025.00	NIST Webbook
ripol	1024.00	NIST Webbook
ripol	1024.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1014.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1008.00	NIST Webbook
ripol	1013.00	NIST Webbook
ripol	1011.00	NIST Webbook
ripol	1013.00	NIST Webbook
ripol	1012.00	NIST Webbook
ripol	1010.00	NIST Webbook
ripol	1022.00	NIST Webbook
ripol	1038.00	NIST Webbook

ripol	1020.00	NIST Webbook
ripol	1028.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1012.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1018.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1018.00	NIST Webbook
ripol	1008.00	NIST Webbook
ripol	1013.00	NIST Webbook
ripol	1016.00	NIST Webbook
ripol	1024.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1056.00	NIST Webbook
ripol	1017.00	NIST Webbook
ripol	1022.00	NIST Webbook
ripol	1015.00	NIST Webbook
ripol	1025.00	NIST Webbook
ripol	1036.00	NIST Webbook
ripol	1019.00	NIST Webbook
ripol	1035.00	NIST Webbook
ripol	1027.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1015.00	NIST Webbook
ripol	1046.00	NIST Webbook
ripol	1008.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1013.00	NIST Webbook
ripol	1013.00	NIST Webbook
ripol	1026.00	NIST Webbook
ripol	1028.00	NIST Webbook
ripol	1027.00	NIST Webbook
ripol	1031.00	NIST Webbook
ripol	1026.00	NIST Webbook
ripol	1022.00	NIST Webbook
ripol	1025.00	NIST Webbook
ripol	1022.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1012.00	NIST Webbook

ripol	1030.00	NIST Webbook
ripol	1024.00	NIST Webbook
ripol	1024.00	NIST Webbook
ripol	1011.00	NIST Webbook
ripol	1036.00	NIST Webbook
ripol	1003.00	NIST Webbook
ripol	1023.00	NIST Webbook
ripol	1028.00	NIST Webbook
ripol	1027.00	NIST Webbook
ripol	1026.00	NIST Webbook
ripol	1026.00	NIST Webbook
ripol	1022.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1027.00	NIST Webbook
ripol	1040.00	NIST Webbook
ripol	1031.00	NIST Webbook
ripol	1031.00	NIST Webbook
ripol	1038.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1000.00	NIST Webbook
ripol	1011.00	NIST Webbook
ripol	1013.00	NIST Webbook
ripol	1018.00	NIST Webbook
ripol	1030.00	NIST Webbook
ripol	1020.00	NIST Webbook
ripol	1014.00	NIST Webbook
ripol	1012.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1017.00	NIST Webbook
ripol	1039.00	NIST Webbook
ripol	1023.00	NIST Webbook
ripol	1029.00	NIST Webbook
ripol	1012.00	NIST Webbook
ripol	1036.00	NIST Webbook
ripol	1015.00	NIST Webbook
ripol	1031.00	NIST Webbook
ripol	1045.00	NIST Webbook
ripol	1032.00	NIST Webbook
ripol	1026.00	NIST Webbook
ripol	1071.00	NIST Webbook
ripol	1036.00	NIST Webbook
ripol	1039.00	NIST Webbook
ripol	1077.00	NIST Webbook

ripol	1022.00		NIST Webbook
tb	429.85 ± 0.50	K	NIST Webbook
tb	428.64	K	Measurement and correlation of vapor-liquid equilibrium data for binary systems composed of camphene, (+)-3-carene, (-)-beta-caryophyllene, p-cymene, and alpha-pinene at 101.33 kPa
tb	428.65	K	Measurement and correlation of vapor-liquid equilibrium data for binary systems composed of camphene, (+)-3-carene, (-)-beta-caryophyllene, p-cymene, and alpha-pinene at 101.33 kPa
tb	428.00 ± 4.00	K	NIST Webbook
tb	429.00 ± 0.70	K	NIST Webbook
tb	428.95 ± 0.40	K	NIST Webbook
tb	429.00 ± 3.00	K	NIST Webbook
tb	436.00 ± 8.00	K	NIST Webbook
tb	430.00 ± 4.00	K	NIST Webbook
tb	435.00 ± 5.00	K	NIST Webbook
tb	429.00 ± 3.00	K	NIST Webbook
tb	430.00 ± 4.00	K	NIST Webbook
tb	429.00 ± 0.50	K	NIST Webbook
tb	429.00 ± 0.50	K	NIST Webbook
tb	429.00 ± 0.50	K	NIST Webbook
tb	429.00 ± 3.00	K	NIST Webbook
tb	429.24	K	Isothermal and isobaric (vapour + liquid) equilibria of (alpha-pinene + n-butanol + n-octane)
tc	654.83	K	Joback Method
tf	202.25 ± 1.00	K	NIST Webbook
tf	210.35 ± 1.00	K	NIST Webbook
tf	197.64 ± 0.10	K	NIST Webbook
tf	200.75 ± 1.00	K	NIST Webbook
vc	0.484	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	274.36	J/mol×K	445.66	Joback Method

cpg	292.47	J/mol×K	480.52	Joback Method
cpg	309.23	J/mol×K	515.38	Joback Method
cpg	324.78	J/mol×K	550.25	Joback Method
cpg	339.25	J/mol×K	585.11	Joback Method
cpg	352.77	J/mol×K	619.97	Joback Method
cpg	365.49	J/mol×K	654.83	Joback Method
dvisc	0.0008040	Pa×s	333.15	Density, Viscosity, and Refractive Index in the Range (283.15 to 353.15) K and Vapor Pressure of r-Pinene, d-Limonene, (()-Linalool, and Citral Over the Pressure Range 1.0 kPa Atmospheric Pressure
dvisc	0.0006350	Pa×s	353.15	Density, Viscosity, and Refractive Index in the Range (283.15 to 353.15) K and Vapor Pressure of r-Pinene, d-Limonene, (()-Linalool, and Citral Over the Pressure Range 1.0 kPa Atmospheric Pressure
dvisc	0.0009080	Pa×s	323.15	Density, Viscosity, and Refractive Index in the Range (283.15 to 353.15) K and Vapor Pressure of r-Pinene, d-Limonene, (()-Linalool, and Citral Over the Pressure Range 1.0 kPa Atmospheric Pressure

dvisc	0.0010390	Paxs	313.15	Density, Viscosity, and Refractive Index in the Range (283.15 to 353.15) K and Vapor Pressure of r-Pinene, d-Limonene, (()-Linalool, and Citral Over the Pressure Range 1.0 kPa Atmospheric Pressure
dvisc	0.0012030	Paxs	303.15	Density, Viscosity, and Refractive Index in the Range (283.15 to 353.15) K and Vapor Pressure of r-Pinene, d-Limonene, (()-Linalool, and Citral Over the Pressure Range 1.0 kPa Atmospheric Pressure
dvisc	0.0013030	Paxs	298.15	Density, Viscosity, and Refractive Index in the Range (283.15 to 353.15) K and Vapor Pressure of r-Pinene, d-Limonene, (()-Linalool, and Citral Over the Pressure Range 1.0 kPa Atmospheric Pressure
dvisc	0.0014090	Paxs	293.15	Density, Viscosity, and Refractive Index in the Range (283.15 to 353.15) K and Vapor Pressure of r-Pinene, d-Limonene, (()-Linalool, and Citral Over the Pressure Range 1.0 kPa Atmospheric Pressure

dvisc	0.0007100	Paxs	343.15	Density, Viscosity, and Refractive Index in the Range (283.15 to 353.15) K and Vapor Pressure of r-Pinene, d-Limonene, (()-Linalool, and Citral Over the Pressure Range 1.0 kPa Atmospheric Pressure
dvisc	0.0016760	Paxs	283.15	Density, Viscosity, and Refractive Index in the Range (283.15 to 353.15) K and Vapor Pressure of r-Pinene, d-Limonene, (()-Linalool, and Citral Over the Pressure Range 1.0 kPa Atmospheric Pressure
hvapt	42.50	kJ/mol	374.50	NIST Webbook
hvapt	40.20	kJ/mol	397.50	NIST Webbook
hvapt	45.00	kJ/mol	362.50	NIST Webbook
hvapt	43.40	kJ/mol	328.00	NIST Webbook
hvapt	46.61	kJ/mol	288.00	NIST Webbook
pvap	101.33	kPa	428.64	Measurement and correlation of vapor-liquid equilibrium data for binary systems composed of camphene, (+)-3-carene, (-)-beta-caryophyllene, p-cymene, and alpha-pinene at 101.33 kPa
pvap	101.33	kPa	428.65	Measurement and correlation of vapor-liquid equilibrium data for binary systems composed of camphene, (+)-3-carene, (-)-beta-caryophyllene, p-cymene, and alpha-pinene at 101.33 kPa

pvap	100.70	kPa	428.65	Measurement and correlation of (vapor + liquid) equilibrium data for {alpha-pinene + p-cymene + (S)-(-)-limonene} ternary system at atmospheric pressure
rfi	1.45420		318.15	Excess Molar Enthalpies of p-Cymene + r-Pinene + a-Pinene at (298.15, 308.15, and 318.15) K and at Atmospheric Pressure
rfi	1.45810		308.15	Excess Molar Enthalpies of p-Cymene + r-Pinene + a-Pinene at (298.15, 308.15, and 318.15) K and at Atmospheric Pressure
rfi	1.46260		298.15	Excess Molar Enthalpies of p-Cymene + r-Pinene + a-Pinene at (298.15, 308.15, and 318.15) K and at Atmospheric Pressure
rfi	1.46570		293.15	Vapor-Liquid Equilibria for the Binary Mixture alpha-Pinene + Octane
rhoI	853.88	kg/m3	298.15	Temperature Dependence on Mutual Solubility Data of the Binary (Methanol + r-Pinene or -Pinene) Systems and Ternary Liquid-Liquid Equilibria for the (Methanol + Ethanol + r-Pinene or -Pinene) Systems

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.41883e+01
Coeff. B	-3.71789e+03
Coeff. C	-4.15050e+01
Temperature range (K), min.	308.97
Temperature range (K), max.	460.34

Datasets

Mass density, kg/m3

Temperature, K - Liquid	Pressure, kPa - Liquid	Mass density, kg/m3 - Liquid
283.15	20000.00	880.0
283.15	25000.00	883.2
283.15	30000.00	886.3
283.15	35000.00	889.4
283.15	40000.00	892.5
298.15	20000.00	868.8
298.15	25000.00	872.1
298.15	30000.00	875.3
298.15	35000.00	878.6
298.15	40000.00	881.9
313.15	20000.00	858.0
313.15	25000.00	861.3
313.15	30000.00	864.7
313.15	35000.00	867.9
313.15	40000.00	871.3
328.15	20000.00	846.7
328.15	25000.00	850.4
328.15	30000.00	854.0
328.15	35000.00	857.5
328.15	40000.00	861.1

343.15	20000.00	835.9
343.15	25000.00	839.7
343.15	30000.00	843.8
343.15	35000.00	847.7
343.15	40000.00	851.4
358.15	20000.00	825.0
358.15	25000.00	829.2
358.15	30000.00	833.3
358.15	35000.00	837.4
358.15	40000.00	841.5

Reference

<https://www.doi.org/10.1016/j.jct.2012.09.012>

Temperature, K	Pressure, kPa	Mass density, kg/m3
283.15	20000.00	880.0
283.15	25000.00	883.2
283.15	30000.00	886.3
283.15	35000.00	889.4
283.15	40000.00	892.5
298.15	20000.00	868.8
298.15	25000.00	872.1
298.15	30000.00	875.3
298.15	35000.00	878.6
298.15	40000.00	881.9
313.15	20000.00	858.0
313.15	25000.00	861.3
313.15	30000.00	864.7
313.15	35000.00	867.9
313.15	40000.00	871.3
328.15	20000.00	846.7
328.15	25000.00	850.4
328.15	30000.00	854.0
328.15	35000.00	857.5
328.15	40000.00	861.1
343.15	20000.00	835.9
343.15	25000.00	839.7
343.15	30000.00	843.8
343.15	35000.00	847.7
343.15	40000.00	851.4
358.15	20000.00	825.0
358.15	25000.00	829.2
358.15	30000.00	833.3
358.15	35000.00	837.4

Sources

- Liquid-Liquid Equilibria of Water + Pentan-1-ol + 2,6-Dimethylheptan-3-one + 2,6-Dimethylheptan-2-ene Pressure: <https://www.doi.org/10.1021/je101119p>
- Density, Viscosity, and Refractive Index of 1,2-Dichloroethane, 1,1,2,2-Tetrachloroethane, and 1,1,1,2-Tetrachloroethane in the Range 283.15 to 353.15 K and Vapor Pressure of r-Pinene, <https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>
- Equilibrium Vapor Pressure of r-Pinene, <https://www.doi.org/10.1021/je8007414>
- d-Limonene, (l)-Linalool, and Citral Over the Pressure Range 0.1 kPa to 10 kPa for (water + acetone + α -pinene, or β -pinene, or limonene) mixtures, <http://webbook.nist.gov/cgi/cbook.cgi?ID=C80568&Units=SI>
- (water + 2-propanol + α -pinene, or β -pinene) and heat capacity measurements of ([α]-pinene + β -pinene) mixtures over the <https://www.doi.org/10.1016/j.jct.2010.06.004>
- temperature range 283.15 K to 358.15 K <https://www.doi.org/10.1016/j.jct.2012.02.024>
- Excess Solid Enthalpy of p-Cymene <https://www.doi.org/10.1016/j.jct.2012.09.012>
- r-Pinene + α -Pinene at (298.15, 308.15, and 318.15) K and at Atmospheric https://en.wikipedia.org/wiki/Joback_method
- Pressure: <https://www.doi.org/10.1021/je060420p>
- Measurement and correlation of (vapor + liquid) equilibrium data for <http://pubs.acs.org/doi/abs/10.1021/ci990307l>
- Vapour-Liquid Equilibrium Measurements of Butyl Oximes Around Critical Conditions and Correlation of <https://www.doi.org/10.1016/j.jct.2012.10.017>
- Measuring the Pressure of Vapor-Liquid Equilibrium Data for Binary Systems: Methods of camphene, <https://www.doi.org/10.1021/je3004854>
- (+)-3-carene, (-)-beta-caryophyllene, <https://www.doi.org/10.1016/j.tca.2019.178318>
- isothymol, and isoparacymene at 101.33 https://www.chemeo.com/doc/models/crippen_log10ws
- liquid) equilibria of (alpha-pinene + <https://www.doi.org/10.1016/j.jct.2004.08.012>
- Methanol + Octane): <http://link.springer.com/article/10.1007/BF02311772>
- Vapor-Liquid Equilibria for the Binary <https://www.doi.org/10.1021/je025631i>
- Mixture alpha-Pinene + Octane: <https://www.doi.org/10.1021/je800407h>
- Temperature Dependence on Mutual <https://www.doi.org/10.1021/je1009619>
- Solubility Data of the Binary (Methanol + r-Pinene) and (Methanol + β -Pinene) Systems and <https://www.doi.org/10.1021/je1009619>
- Temperature Dependence of the <https://www.doi.org/10.1021/je1009619>
- Equilibria of the Binary Mixtures: the <https://www.doi.org/10.1021/je1009619>
- (Methanol + Ethanol + r-Pinene or <https://www.doi.org/10.1021/je1009619>
- Pinene) Systems: <https://www.doi.org/10.1021/je1009619>

Legend

- chl: Standard liquid enthalpy of combustion
- cpg: Ideal gas heat capacity
- dvisc: Dynamic viscosity
- gf: Standard Gibbs free energy of formation
- hf: Enthalpy of formation at standard conditions
- hfus: Enthalpy of fusion at standard conditions
- hvap: Enthalpy of vaporization at standard conditions
- hvapt: Enthalpy of vaporization at a given temperature
- ie: Ionization energy
- log10ws: Log10 of Water solubility in mol/l

logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
rfi:	Refractive Index
rhof:	Liquid Density
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

Latest version available from:

<https://www.cheméo.com/cid/70-176-9/alpha-Pinene.pdf>

Generated by Cheméo on 2025-12-19 00:03:57.605088387 +0000 UTC m=+5850835.135129054.

Cheméo (<https://www.cheméo.com>) is the biggest free database of chemical and physical data for the process industry.