TABLE S1. Total Energies for Reactants of the OH^- + $CH_{(4-n)}Cl_n$ Reaction for n = 1–4.

		Energies (E_h)				
System	Method (Y)	aug-cc-pVDZ	aug-cc-pVTZ	aug-cc-pVQZ	CBS[a]	γ^Y
OH^-	HF	−75.395497	−75.411729	−75.416490	−75.419146	0.456922
	MP2	−75.637018	−75.702256	−75.724904	−75.737957	0.547231
	MP3	−75.629248	−75.691400	−75.711879	−75.723571	0.517622
	MP4	−75.649200	−75.715900			
	CCSD	−75.635828	−75.696955	−75.716851	−75.728184	0.510894
	CCSD(T)	−75.643896	−75.709399	−75.730278	−75.742124	0.499597
CH_3Cl	HF	−499.121955	−499.148151	−499.154160	−499.157313	0.349795
	MP2	−499.425314	−499.528855	−499.561495	−499.579975	0.493714
	MP3	−499.452919	−499.558682	−499.588717	−499.605356	0.441305
	MP4	−499.463500	−499.575400			
	CCSD	−499.455265	−499.558825	−499.587920	−499.603999	0.436214
	CCSD(T)	−499.464795	−499.575279	−499.606194	−499.623264	0.434313
CH_2Cl_2	HF	−958.039299	−958.078459	−958.088053	−958.093181	0.375962
	MP2	−958.483982	−958.644651	−958.697120	−958.727027	0.512706
	MP3	−958.516607	−958.683725	−958.733343	−958.761095	0.462968
	CCSD	−958.518614	−958.682502	−958.730377	−958.757062	0.454947
	CCSD(T)	−958.534007	−958.709704	−958.760796	−958.789247	0.452727
$CHCl_3$	HF	−1416.949344	−1417.001711	−1417.015012	−1417.022188	0.391044
	MP2	−1417.540557	−1417.758264	−1417.830627	−1417.872008	0.522466
	MP3	−1417.575804	−1417.803862	−1417.873074	−1417.911963	0.474005
	CCSD	−1417.578318	−1417.802152	−1417.868805	−1417.906108	0.464434
	CCSD(T)	−1417.600317	−1417.840864	−1417.912178	−1417.952053	0.462236
CCl_4	HF	−1875.850397	−1875.915783	−1875.932871	−1875.942156	0.403340
	MP2	−1876.592694	−1876.866733	−1876.959130	−1877.012105	0.530476
	MP3	−1876.627919	−1876.915903	−1877.004810	−1877.054937	0.482784
	CCSD	−1876.632123	−1876.914928	−1877.000448	−1877.048464	0.472182
	CCSD(T)	−1876.661384	−1876.965798	−1877.057483	−1877.108918	0.470149

[a] Complete basis set limit obtained by extrapolation of the aug-cc-pVxZ results for x = D,T,Q with eq. (1).

TABLE S2. Total Energies for Products of the $OH^- + CH_{(4-n)}Cl_n$ S_N2 Reaction (R1) for n = 1–4.

System	Method (Y)	Energies (E_h) aug-cc-pVDZ	aug-cc-pVTZ	aug-cc-pVQZ	CBS[a]	γ^Y
Cl^-	HF	−459.563645	−459.573481	−459.576353	−459.577954	0.454662
	MP2	−459.722765	−459.780792	−459.802375	−459.814958	0.588792
	MP3	−459.735115	−459.797578	−459.819023	−459.831358	0.540802
	MP4	−459.738200	−459.805200			
	CCSD	−459.734186	−459.795555	−459.816326	−459.828243	0.532649
	CCSD(T)	−459.738302	−459.805042	−459.827254	−459.839959	0.523180
CH_3OH	HF	−115.060683	−115.090801	−115.098241	−115.102225	0.379304
	MP2	−115.421931	−115.528648	−115.562595	−115.581849	0.498530
	MP3	−115.439770	−115.542677	−115.572846	−115.589675	0.456703
	MP4	−115.453900	−115.562200			
	CCSD	−115.445276	−115.546123	−115.575549	−115.591947	0.454389
	CCSD(T)	−115.455880	−115.562184	−115.592851	−115.609898	0.448848
CH_2ClOH	HF	−573.992750	−574.035571	−574.046406	−574.052245	0.389393
	MP2	−574.492556	−574.656284	−574.710016	−574.740671	0.515409
	MP3	−574.516342	−574.680737	−574.730536	−574.758506	0.473063
	MP4	−574.537600	−574.656600			
	CCSD	−574.520974	−574.682248	−574.730498	−574.757528	0.466784
	CCSD(T)	−574.537384	−574.709002	−574.759870	−574.788311	0.462126
$CHCl_2OH$	HF	−1032.913400	−1032.969139	−1032.983573	−1032.991398	0.399337
	MP2	−1033.557611	−1033.778104	−1033.851715	−1033.893844	0.524917
	MP3	−1033.585349	−1033.810587	−1033.880016	−1033.919150	0.481992
	CCSD	−1033.589627	−1033.810768	−1033.877851	−1033.915540	0.473779
	CCSD(T)	−1033.612536	−1033.848896	−1033.920020	−1033.959913	0.469694
CCl_3OH	HF	−1491.818786	−1491.887831	−1491.906003	−1491.915894	0.406444
	MP2	−1492.611910	−1492.889189	−1492.982656	−1493.036243	0.530347
	MP3	−1492.641294	−1492.927052	−1493.016002	−1493.066236	0.487069
	CCSD	−1492.646431	−1492.927147	−1493.012956	−1493.061240	0.477683
	CCSD(T)	−1492.676305	−1492.977097	−1493.068404	−1493.119709	0.474121

[a] Complete basis set limit obtained by extrapolation of the aug-cc-pVxZ results for x = D,T,Q with eq. (1).

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TABLE S3. Total Energies for Products of the $OH^- + CH_{(4-n)}Cl_n$ PT Reaction (R2) for n = 1–3.

		Energies (E_h)				
System	Method (Y)	aug-cc-pVDZ	aug-cc-pVTZ	aug-cc-pVQZ	CBS[a]	γ^Y
H_2O	HF	–76.040761	–76.059859	–76.065203	–76.068154	0.434366
	MP2	–76.260910	–76.328954	–76.351826	–76.364933	0.528750
	MP3	–76.265525	–76.331465	–76.352421	–76.364304	0.498013
	MP4	–76.274200	–76.343500			
	CCSD	–76.268628	–76.333574	–76.354033	–76.365614	0.493337
	CCSD(T)	–76.273902	–76.342290	–76.363496	–76.375463	0.485067
CH_2Cl^-	HF	–498.472945	–498.494812	–498.500206	–498.503094	0.378721
	MP2	–498.783885	–498.883747	–498.916477	–498.935145	0.514686
	MP3	–498.808698	–498.910342	–498.940478	–498.957329	0.462267
	MP4	–498.821300	–498.929800			
	CCSD	–498.811233	–498.910089	–498.939105	–498.955295	0.457291
	CCSD(T)	–498.823053	–498.929570	–498.960592	–498.977872	0.453471
$CHCl_2^-$	HF	–957.425864	–957.458982	–957.467553	–957.472198	0.399068
	MP2	–957.875078	–958.030645	–958.083368	–958.113625	0.533401
	MP3	–957.905662	–958.067218	–958.117311	–958.145579	0.485037
	CCSD	–957.907816	–958.065474	–958.113576	–958.140632	0.476717
	CCSD(T)	–957.925864	–958.096301	–958.147883	–958.176849	0.472595
CCl_3^-	HF	–1416.362157	–1416.407439	–1416.419361	–1416.425851	0.406617
	MP2	–1416.960902	–1417.172208	–1417.244843	–1417.286632	0.541515
	MP3	–1416.993359	–1417.214251	–1417.284093	–1417.323657	0.495292
	CCSD	–1416.995723	–1417.211798	–1417.278828	–1417.316657	0.485290
	CCSD(T)	–1417.021632	–1417.255680	–1417.327742	–1417.368350	0.481396

[a] Complete basis set limit obtained by extrapolation of the aug-cc-pVxZ results for x = D,T,Q with eq. (1).

TABLE S4. Total Energies for Reactant Complexes of the OH^- + $CH_{(4-n)}Cl_n$ Reactions for n = 1–4.

		Energies (E_h)				
Complex	Method (Y)	aug-cc-pVDZ	aug-cc-pVTZ	aug-cc-pVQZ	CBS[a]	γ^Y
OH^-/CH_3Cl	HF	−574.540470	−574.581848	−574.592445	−574.598174	0.394536
	MP2	−575.088461	−575.256417	−575.311549	−575.343004	0.515539
	MP3	−575.109110	−575.276514	−575.327037	−575.355391	0.471180
	CCSD	−575.117071	−575.280982	−575.329868	−575.357237	0.465223
	CCSD(T)	−575.135620	−575.310795	−575.362427	−575.391261	0.459348
OH^-/CH_2Cl_2	HF	−1033.469077	−1033.522430	−1033.536402	−1033.543997	0.404243
	MP2	−1034.161171	−1034.385308	−1034.460284	−1034.503210	0.526021
	MP3	−1034.187062	−1034.414925	−1034.485105	−1034.524655	0.481564
	CCSD	−1034.193907	−1034.417115	−1034.484818	−1034.522853	0.473718
	CCSD(T)	−1034.219145	−1034.458542	−1034.530405	−1034.570692	0.468469
OH^-/CCl_4	HF	−1951.252121	−1951.334061	−1951.355807	−1951.367666	0.410123
	MP2	−1952.242756	−1952.582951	−1952.698055	−1952.764090	0.532457
	MP3	−1952.269539	−1952.620634	−1952.730139	−1952.792006	0.488109
	CCSD	−1952.280270	−1952.624908	−1952.730325	−1952.789651	0.478018
	CCSD(T)	−1952.318918	−1952.689789	−1952.802407	−1952.865690	0.474292

[a] Complete basis set limit obtained by extrapolation of the aug-cc-pVxZ results for x = D,T,Q with eq. (1).

TABLE S5. Total Energies for Product Complexes of the OH^- + $CH_{(4-n)}Cl_n$ PT Reaction (R2) for n = 1–3.

		Energies (E_h)				
Complex	Method (Y)	aug-cc-pVDZ	aug-cc-pVTZ	aug-cc-pVQZ	CBS[a]	γ^Y
CH_2Cl^-/H_2O	HF	−574.535332	−574.575782	−574.586341	−574.592076	0.402818
	MP2	−575.079776	−575.247808	−575.303002	−575.334496	0.515901
	MP3	−575.105679	−575.273478	−575.324079	−575.352473	0.470769
	CCSD	−575.111174	−575.275101	−575.324024	−575.351418	0.465557
	CCSD(T)	−575.129958	−575.305157	−575.356832	−575.385695	0.459695
$CHCl_2^-/H_2O$	HF	−1033.484115	−1033.536224	−1033.550105	−1033.557682	0.411787
	MP2	−1034.165379	−1034.389344	−1034.464505	−1034.507561	0.527838
	MP3	−1034.197549	−1034.425450	−1034.495910	−1034.535648	0.483539
	CCSD	−1034.202530	−1034.425472	−1034.493414	−1034.531621	0.476128
	CCSD(T)	−1034.227214	−1034.466409	−1034.538540	−1034.579015	0.470768
CCl_3^-/H_2O	HF	−1492.417564	−1492.481995	−1492.499342	−1492.508836	0.416583
	MP2	−1493.246095	−1493.525895	−1493.620990	−1493.675591	0.535008
	MP3	−1493.280627	−1493.567991	−1493.658176	−1493.709189	0.491358
	CCSD	−1493.285962	−1493.567417	−1493.654257	−1493.703212	0.482473
	CCSD(T)	−1493.318014	−1493.620777	−1493.713305	−1493.765367	0.477571

[a] Complete basis set limit obtained by extrapolation of the aug-cc-pVxZ results for x = D,T,Q with eq. (1).

TABLE S6. Total Energies for Saddle Points of the $OH^- + CH_{(4-n)}Cl_n$ S_N2 Reaction for n = 1–4.

		Energies (E_h)				
n	Method (Y)	aug-cc-pVDZ	aug-cc-pVTZ	aug-cc-pVQZ	CBS[a]	γ^Y
1	HF	−574.536114	−574.575906	−574.586008	−574.591457	0.390829
	MP2	−575.083707	−575.249956	−575.304655	−575.335877	0.516817
	MP3	−575.103346	−575.269277	−575.319555	−575.347795	0.473201
	CCSD	−575.112664	−575.274912	−575.323458	−575.350655	0.466831
	CCSD(T)	−575.133052	−575.306701	−575.357994	−575.386653	0.460424
2	HF	−1033.449562	−1033.502092	−1033.515743	−1033.523150	0.400885
	MP2	−1034.144362	−1034.367610	−1034.442245	−1034.484971	0.525699
	MP3	−1034.167383	−1034.394348	−1034.464323	−1034.503766	0.482088
	CCSD	−1034.176307	−1034.398584	−1034.466022	−1034.503911	0.473848
	CCSD(T)	−1034.203959	−1034.442663	−1034.514296	−1034.554451	0.468311
3	HF	−1492.347048	−1492.413064	−1492.430519	−1492.440031	0.408499
	MP2	−1493.195288	−1493.475636	−1493.570361	−1493.624691	0.531678
	MP3	−1493.218423	−1493.506158	−1493.595890	−1493.646584	0.488039
	CCSD	−1493.228610	−1493.510653	−1493.597036	−1493.645662	0.478681
	CCSD(T)	−1493.264599	−1493.568067	−1493.660153	−1493.711893	0.473940
4	HF	−1951.227273	−1951.307148	−1951.328549	−1951.340247	0.414381
	MP2	−1952.231312	−1952.569618	−1952.684801	−1952.750956	0.536017
	MP3	−1952.253460	−1952.602391	−1952.712085	−1952.774155	0.492257
	CCSD	−1952.265722	−1952.607998	−1952.713521	−1952.773001	0.482077
	CCSD(T)	−1952.309165	−1952.677919	−1952.790773	−1952.854290	0.478288

[a] Complete basis set limit obtained by extrapolation of the aug-cc-pVxZ results for x = D,T,Q with eq. (1).

TABLE S7. Total Energies for Saddle Points of the $OH^- + CH_{(4-n)}Cl_n$ Proton Transfer Reaction for n = 1–3.

		Energies (E_h)				
n	Method (Y)	aug-cc-pVDZ	aug-cc-pVTZ	aug-cc-pVQZ	CBS[a]	γ^Y
1	HF	−574.530191	−574.570725	−574.581235	−574.586935	0.399884
	MP2	−575.079489	−575.247533	−575.302679	−575.334140	0.515385
	MP3	−575.103345	−575.271053	−575.321593	−575.349949	0.470436
	CCSD	−575.109181	−575.273051	−575.321904	−575.349251	0.464998
	CCSD(T)	−575.128444	−575.303661	−575.355276	−575.384097	0.459062
2	HF	−1033.467433	−1033.520269	−1033.534154	−1033.541709	0.405783
	MP2	−1034.160700	−1034.384772	−1034.459777	−1034.502724	0.526403
	MP3	−1034.187312	−1034.415115	−1034.485330	−1034.524906	0.481955
	CCSD	−1034.193425	−1034.416446	−1034.484159	−1034.522207	0.474218
	CCSD(T)	−1034.219050	−1034.458371	−1034.530270	−1034.570583	0.468877

[a] Complete basis set limit obtained by extrapolation of the aug-cc-pVxZ results for x = D,T,Q with eq. (1).

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TABLE S8. Additional Energies Needed for the Hydride Abstraction Channels of OH^- + $CH_{(4-n)}Cl_n$, for n = 1–4 and for the OH^- + CH_4 Reaction.

		Energies (E_h)				
Complex	Method (Y)	aug-cc-pVDZ	aug-cc-pVTZ	aug-cc-pVQZ	CBS[a]	γ^Y
H^-	HF	-0.486780	-0.487640	-0.487808	-0.487892	0.293928
	MP2	-0.511958	-0.515911	-0.517094	-0.517756	0.466819
	MP3	-0.519862	-0.522723	-0.523284	-0.523564	0.293919
	CCSD	-0.524029	-0.526562	-0.527139	-0.527442	0.347128
	CCSD(T)	-0.524029	-0.526562	-0.527139	-0.527442	0.347128
CH_4	HF	-40.199428	-40.213024	-40.215621	-40.216905	0.285423
	MP2	-40.367727	-40.414099	-40.426939	-40.434012	0.429437
	MP3	-40.388213	-40.432245	-40.442646	-40.448150	0.361211
	CCSD	-40.391220	-40.434141	-40.444404	-40.449853	0.366087
	CCSD(T)	-40.395770	-40.440762	-40.451486	-40.457174	0.364763
CH_3^-	HF	-39.511611	-39.522768	-39.525229	-39.526505	0.334985
	MP2	-39.696047	-39.739894	-39.752783	-39.759977	0.458039
	MP3	-39.711485	-39.752202	-39.762302	-39.767718	0.381081
	CCSD	-39.713871	-39.753230	-39.763169	-39.768523	0.388561
	CCSD(T)	-39.721138	-39.763174	-39.773718	-39.779388	0.385711

[a] Complete basis set limit obtained by extrapolation of the aug-cc-pVxZ results for x = D,T,Q with eq. (1).

Table S9. MP2/aug-cc-pVDZ Optimized Geometries of Reactants and Products

OH^-:

r = 0.97328462 ang.

H_2O:

r = 0.96592873 ang.

θ = 103.8732027 degrees

CH_4:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	1	0.634027	0.634027	0.634027
2	6	0.000000	0.000000	0.000000
3	1	−0.634027	−0.634027	0.634027
4	1	−0.634027	0.634027	−0.634027
5	1	0.634027	−0.634027	−0.634027

CH_3Cl:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	17	0.000000	0.000000	0.661641
2	6	0.000000	0.000000	−1.135426
3	1	0.000000	1.041005	−1.478450
4	1	0.901537	−0.520502	−1.478450
5	1	−0.901537	−0.520502	−1.478450

CH_2Cl_2:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	17	0.000000	1.481328	−0.218379
2	6	0.000000	0.000000	0.775814
3	1	0.909325	0.000000	1.385000
4	1	−0.909325	0.000000	1.385000
5	17	0.000000	−1.481328	−0.218379

$CHCl_3$:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	1	0.000000	0.000000	1.558957
2	6	0.000000	0.000000	0.465057
3	17	0.000000	1.692294	−0.085280
4	17	1.465569	−0.846147	−0.085280
5	17	−1.465569	−0.846147	−0.085280

CCl_4:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	17	1.029381	1.029381	1.029381
2	6	0.000000	0.000000	0.000000
3	17	−1.029381	−1.029381	1.029381
4	17	−1.029381	1.029381	−1.029381
5	17	1.029381	−1.029381	−1.029381

CH_3^-:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	1	0.000000	1.046095	−0.254991
2	6	0.000000	0.000000	0.127495
3	1	−0.905945	−0.523048	−0.254991
4	1	0.905945	−0.523048	−0.254991

CH_2Cl^-:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	1	−1.537050	−0.876094	0.472867
2	6	−1.290831	0.000000	−0.177760
3	1	−1.537047	0.876096	0.472867
4	17	0.636417	0.000000	0.007107

$CHCl_2^-$:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	1	−1.067563	1.190025	0.000000
2	6	0.026689	0.969909	0.000000
3	17	0.026689	−0.206161	1.514579
4	17	0.026689	−0.206161	−1.514579

CCl_3^-:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	17	0.000000	0.000000	0.000000
2	6	0.000000	0.000000	1.906500
3	17	1.860962	0.000000	2.320701
4	17	−0.516524	1.787843	2.320701

CH_3OH:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	1	−1.083640	0.997404	−0.000276
2	6	−0.672494	−0.020095	0.000000
3	1	−1.032841	−0.546938	0.899578
4	1	−1.032803	−0.547407	−0.899316
5	8	0.755289	0.122499	0.000000
6	1	1.141935	−0.762475	0.000004

CH_2ClOH:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	17	1.102206	−0.129061	−0.010747
2	6	−0.565709	0.598146	0.044324
3	1	−0.615956	1.127075	1.006202
4	1	−0.632046	1.289332	−0.801906
5	8	−1.568500	−0.357184	−0.116714
6	1	−1.547253	−0.953777	0.646168

$CHCl_2OH$:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	17	1.464642	−0.527972	−0.066464
2	6	0.000000	0.406062	0.422037
3	17	−1.464638	−0.527978	−0.066464
4	1	0.000001	0.470322	1.513948
5	8	−0.000007	1.678406	−0.090710
6	1	−0.000010	1.617216	−1.060716

CCl_3OH:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	17	−1.690349	−0.000076	−0.323047
2	6	−0.024064	0.000000	0.281917
3	17	0.847139	−1.456821	−0.335156
4	17	0.847005	1.456896	−0.335157
5	8	−0.092494	−0.000003	1.650666
6	1	0.819832	0.000040	1.990299

Table S10. MP2/aug-cc-pVDZ Critical Point Optimized Geometries

Reactant complex OH^- + CH_3Cl:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	17	1.483808	−0.299689	0.000000
2	6	0.008125	0.783028	0.000000
3	1	−0.932776	0.167706	0.000000
4	1	0.090614	1.404846	−0.901172
5	1	0.090612	1.404844	0.901174
6	8	−2.663421	−0.198015	0.000000
7	1	−3.214570	−0.996732	0.000000

Proton transfer product complex H_2O + CH_2Cl^-:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	17	−1.273881	−0.388829	0.000000
2	6	−0.032157	1.054068	0.000000
3	1	1.479850	0.296161	0.000000
4	1	−0.376113	1.634797	−0.884012
5	1	−0.376113	1.634797	0.884013
6	8	2.384357	−0.263804	0.000000
7	1	2.046432	−1.169645	0.000006

S_N2 saddle point for OH^- + CH_3Cl:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	17	−1.657852	0.000036	0.000008
2	6	0.398411	−0.014663	−0.000001
3	1	0.566149	−0.545967	0.929261
4	1	0.566141	−0.546052	−0.929216
5	1	0.589545	1.052467	−0.000051
6	8	2.631756	0.113223	−0.000017
7	1	3.017143	−0.778872	0.000022

Proton transfer saddle point for OH^- + CH_3Cl:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	17	−1.309297	−0.350919	0.000244
2	6	0.031266	0.975050	−0.000015
3	1	−0.239359	1.582694	0.888158
4	1	−0.239687	1.582678	−0.888100
5	8	2.382814	−0.266388	−0.000435
6	1	2.119436	−1.198013	−0.000382
7	1	1.367544	0.279065	−0.000254

Reactant complex for $OH^- + CH_2Cl_2$:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	17	−1.094509	−1.291943	−0.119441
2	6	0.072163	−0.046437	0.504136
3	17	−0.421943	1.597417	−0.096884
4	1	−0.091217	−0.015729	1.589281
5	1	1.189248	−0.275404	0.161992
6	8	2.649677	−0.582906	−0.052509
7	1	3.051263	0.039944	−0.678492

Proton transfer product complex for $H_2O + CHCl_2^-$:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	17	0.143183	1.594403	−0.105137
2	6	−0.007740	−0.140078	0.629553
3	8	2.485734	−1.227354	−0.077527
4	17	−1.540483	−0.892007	−0.150947
5	1	−0.414447	0.122739	1.627720
6	1	1.554972	−0.906980	0.209001
7	1	2.774148	−0.497196	−0.640403

S_N2 saddle point for OH^- + CH_2Cl_2:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	17	−1.927445	−0.333015	0.000000
2	6	0.156293	−0.452317	0.000000
3	17	0.654446	1.239924	0.000000
4	1	0.264984	−0.955711	0.949681
5	1	0.264984	−0.955711	−0.949681
6	8	2.171312	−1.281133	0.000000
7	1	2.802757	−0.543058	0.000000

Proton transfer saddle point for OH^- + CH_2Cl_2:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	1	2.875595	−0.311509	−0.654770
2	8	2.471980	−0.967062	−0.065728
3	6	0.082075	−0.082209	0.522883
4	17	−0.129164	1.635042	−0.096267
5	1	−0.140402	0.004422	1.598157
6	17	−1.298197	−1.101847	−0.123133
7	1	1.261663	−0.527478	0.174941

Proton transfer product complex $H_2O + CCl_3^-$:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	1	−1.824653	0.000003	−0.900332
2	8	−2.807173	0.000001	−1.115830
3	6	−0.097721	0.000000	−0.203768
4	17	−0.369577	−0.000002	1.660936
5	17	1.010239	−1.475225	−0.498654
6	17	1.010238	1.475227	−0.498651
7	1	−3.196941	0.000001	−0.232161

S_N2 saddle point for $OH^- + CHCl_3$:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	17	−2.026793	−0.007746	0.388443
2	6	0.115492	0.009946	0.318001
3	1	0.236506	0.009737	1.391204
4	17	0.402549	−1.480338	−0.567723
5	17	0.402648	1.486510	−0.563375
6	8	2.173746	0.098734	1.029956
7	1	2.447720	−0.832532	1.086287

Reactant complex OH^- + CCl_4:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	17	0.401115	1.617610	−0.000225
2	6	−0.299942	0.004892	0.000000
3	8	2.799554	0.074171	−0.000011
4	17	0.151935	−0.896076	−1.459919
5	17	0.151939	−0.895670	1.460166
6	17	−2.125419	0.169492	−0.000021
7	1	3.550524	−0.543785	0.000077

S_N2 saddle point for OH^- + CCl_4:

Center Number	Atomic Number	Coordinates (Angstroms) X	Y	Z
1	17	0.287872	1.742336	−0.000012
2	6	0.014385	0.005872	0.000000
3	17	0.259377	−0.881734	−1.512008
4	17	0.259379	−0.881714	1.512020
5	17	−2.048123	0.016832	0.000000
6	8	2.301196	0.106721	−0.000002
7	1	2.609524	−0.816246	0.000004