
ADF25: driver data-sets for ADAS204 calculations

Provides driver datasets for ADAS204 bundle-n population calculations.

Utilising subroutines :

ADAS204

Formatted files to ADF25 specification :

Database Status	Date = March 17, 2003	Data type = ADAS204 drivers	Data root = /.../adas/adas/adf25/		
<i>sequence</i>	<i>members</i>	<i>Ions</i>	<i>libraries</i>	<i>Comments</i>	<i>Resolution</i>
Hydrogen	h	h0,he1,be3,c5,o7	bns93#h	Dickson '93	LS
Helium	he	he0,be2,c4,o6	bns93#he	Dickson '93	LS
Lithium	li	be1,c3,o5	bns93#li	Dickson '93	LS
Beryllium	be	be0,c2,o4	bns93#be	Dickson '93	LS
Boron	b	c1,o3	bns93#b	Dickson '93	LS
Carbon	c	c0,o2	bns93#c	Dickson '93	LS
Nitrogen	n	o1	bns93#n	Dickson '93	LS
Oxygen	o	o0	bns93#o	Dickson '93	LS
Hydrogen	h	h0,he1,li2,be3,c5,n6,o7,ne9	bns96#h	O'Mullane	LS
Helium	he	he0,li1,be2,c4,n5,o6,ne8	bns96#he	O'Mullane	LS
Lithium	li	li0,be1,c3,n4,o5,ne7	bns96#li	O'Mullane	LS
Beryllium	be	be0,c2,n3,o4,ne6	bns96#be	O'Mullane	LS
Boron	b	c1,n2,o3,ne5	bns96#b	O'Mullane	LS
Carbon	c	c0,n1,o2,ne4	bns96#c	O'Mullane	LS
Nitrogen	n	n0,o1,ne3	bns96#n	O'Mullane	LS
Oxygen	o	o0,ne2	bns96#o	O'Mullane	LS
Fluorine	f	ne1	bns96#f	O'Mullane	LS
Neon	ne	ne0	bns96#ne	O'Mullane	LS

Hydrogen h h0 bns97#h O'Mullane LS

Notes:

Data lines :

```
ZT, SVREF, SPEC, DATE, CODE
NEB, NDT, TREF
(EB(IEB), IEB=1,NEB)
(DT(IDT), IDT=1,NDT)
for IDT = 1 to NDT
    (SV(IEB,IDT), IEB=1,NEB)
repeat
TT, EREF, DREF
TT(ITT), ITT=1,NTT)
SVT(ITT), ITT=1,NTT)
```

Format:

variable identification :

<i>name</i>	<i>meaning</i>
ZT	charge of target ion
SVREF	beam emission coefft. at reference beam energy, target density and temperature
SPEC	specification of target (text) (eg. BE)
DATE	date of calculation
CODE	name of source computer code for calculation
NEB	number of beam energies

NDT	number of target densities
TREF	reference target temperature (eV)
EB()	beam energies (eV/amu)
DT()	target densities (cm-3)
SV(,)	beam emission coefficient (cm3 s-1) at reference temp. 1st parameter - beam energy 2nd parameter - target density
NTT	number of target temperatures
EREF	reference beam energy (eV/amu)
DREF	reference target density (cm-3)
TT()	target temperatures (eV)
SVT()	beam emission coefficient (cm3 s-1) at reference beam energy and target density

Table B25c - example.

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&FILINFO NUCCHG= 6, NPARNT=2, SEQ='b ', XRMEMB='c1n ', &END
 24 24 4.00D+06 0.00D+00 2.00D+00 1.00D+00 1.00D+00 1.00D+00
 0 4 1 0
1.28D+03 1.28D+04 1.28D+05 1.28D+06 1.28D+07 1.28D+08 3.84D+08
1.28D+09 3.84D+09 1.28D+10 3.84D+10 1.28D+11 3.84D+11 1.28D+12
3.84D+12 1.28D+13 3.84D+13 1.28D+14 3.84D+14 1.28D+15 3.84D+15
1.28D+16 3.84D+16 1.28D+17
2.00D+03 2.80D+03 4.00D+03 6.00D+03 8.00D+03 1.20D+04 2.00D+04
2.80D+04 4.00D+04 6.00D+04 8.00D+04 1.20D+05 2.00D+05 2.80D+05
4.00D+05 6.00D+05 8.00D+05 1.20D+06 2.00D+06 2.80D+06 4.00D+06
6.00D+06 8.00D+06 1.20D+07
0.00D+00 0.00D+00 0.00D+00 0.00D+00 0.00D+00 0.00D+00 0.00D+00
0.00D+00 0.00D+00 0.00D+00 0.00D+00 0.00D+00 0.00D+00 0.00D+00
0.00D+00 0.00D+00 0.00D+00 0.00D+00 0.00D+00 0.00D+00 0.00D+00
0.00D+00 0.00D+00 0.00D+00 0.00D+00
2.00D+03 2.80D+03 4.00D+03 6.00D+03 8.00D+03 1.20D+04 2.00D+04
2.80D+04 4.00D+04 6.00D+04 8.00D+04 1.20D+05 2.00D+05 2.80D+05
4.00D+05 6.00D+05 8.00D+05 1.20D+06 2.00D+06 2.80D+06 4.00D+06
6.00D+06 8.00D+06 1.20D+07
2.50D 04 0.00D 00
 1 520 24
 1 2 3 4 5 6 7 8 9 10 12 15 20 30
 40 50 70 100 150 200 250 300 400 500
0.00D+00 0.00D+00 0.00D+00 0.00D+00 0.00D+00 0.00D+00 0.00D+00
0.00D+00 0.00D+00 0.00D+00 0.00D+00 0.00D+00 0.00D+00 0.00D+00
0.00D+00 0.00D+00 0.00D+00 0.00D+00 0.00D+00 0.00D+00 0.00D+00
0.00D+00 0.00D+00 0.00D+00

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-----
PRT= 1 TRMPT= (1S) SPNPR= 1 NCTPRT=1000 SYS= 1 SENSYS= 2
NMIN= 2 UDEF= 5 .506 .000 .000 .000 .000
2 1.49413 .75000 .00000 1.00000
4
4 3 2.3250 1.0000 1000 .09690 .80543 .00000 0.00D+00
2 2 1.3704 .8750 1000 .26006 .26181 .00000 0.00D+00
2 2 1.3704 .8750 3 .31078 .01690 .00000 0.00D+00
7 2 1.3704 .8750 3 .34408 .02847 .00000 0.00D+00
FIT PARAMETERS FOR GP
1 0 IBSEL= 1
JPRT= 1 PRTWHT= 1.000 IBSEL= 14
JPRT= 2 PRTWHT= .000 IBSEL= 0
3
1.000 2 6.20750 2 .76750 1 .44804
5.08D-12 4.10D-12 3.55D-12 3.72D-12 4.17D-12 4.73D-12 6.89D-12
1.41D-11 2.86D-11 4.56D-11 5.20D-11 5.08D-11 3.89D-11 2.96D-11
2.07D-11 1.30D-11 9.13D-12 5.37D-12 2.65D-12 1.65D-12 9.85D-13
5.45D-13 3.57D-13 1.96D-13
4.75D-71 2.05D-53 3.66D-40 7.93D-30 1.22D-24 2.00D-19 3.23D-15
2.17D-13 5.35D-12 6.89D-11 2.59D-10 1.05D-09 3.52D-09 6.16D-09
9.56D-09 1.36D-08 1.63D-08 1.93D-08 2.18D-08 2.26D-08 2.28D-08
2.24D-08 2.18D-08 2.06D-08
-----
PRT= 2 TRMPT= (3P) SPNPR= 3 NCTPRT= 4 SYS= 1 SENSYS= 2
NMIN= 2 UDEF= 5 .672 .000 .000 .000 .000
2 1.65579 .75000 .00000 1.00000
4
4 3 2.3250 1.0000 1000 .08546 .29255 .00000 0.00D+00
3 3 2.3250 .9444 1000 .18864 .05456 .00000 0.00D+00
2 3 2.3250 .9444 1000 .22059 .56857 .00000 0.00D+00
2 3 2.3250 .9444 5 .27495 .11796 .00000 0.00D+00
FIT PARAMETERS FOR GP
1 0 IBSEL= 1
JPRT= 1 PRTWHT= .000 IBSEL= 0
JPRT= 2 PRTWHT= 1.000 IBSEL= 15
3
1.000 2 6.20750 1 .76750 2 .39080
2.56D-12 2.78D-12 2.59D-12 2.07D-12 1.65D-12 1.13D-12 6.73D-13
4.90D-13 3.80D-13 3.43D-13 3.55D-13 3.72D-13 3.33D-13 2.75D-13
2.06D-13 1.37D-13 9.91D-14 6.01D-14 3.07D-14 1.94D-14 1.18D-14
6.61D-15 4.38D-15 2.44D-15
8.89D-63 2.20D-47 8.14D-36 8.67D-27 2.96D-22 1.07D-17 5.18D-14
2.07D-12 3.43D-11 3.20D-10 1.00D-09 3.26D-09 8.77D-09 1.36D-08
1.92D-08 2.50D-08 2.85D-08 3.21D-08 3.45D-08 3.48D-08 3.44D-08
3.32D-08 3.19D-08 2.98D-08
-----
PRT= 2 TRMPT= (3P) SPNPR= 3 NCTPRT= 4 SYS= 2 SENSYS= 4
NMIN= 2 UDEF= 5 .540 .000 .000 .000 .000
2 1.49144 .75000 .00000 1.00000
4
4 3 2.3250 1.0000 1000 .08546 .29255 .00000 0.00D+00
3 3 2.3250 .9444 1000 .18864 .05456 .00000 0.00D+00
2 3 2.3250 .9444 1000 .22059 .56857 .00000 0.00D+00
2 3 2.3250 .9444 5 .27495 .11796 .00000 0.00D+00
FIT PARAMETERS FOR GP
1 0 IBSEL= 1
JPRT= 1 PRTWHT= .000 IBSEL= 0
JPRT= 2 PRTWHT= 1.000 IBSEL= 18
3

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1.000      2      6 20750      1      76750      2      45794
5.19D-12  5.61D-12  5.23D-12  4.38D-12  3.34D-12  2.29D-12  1.37D-12
9.98D-13  7.74D-13  6.99D-13  7.21D-13  7.52D-13  6.73D-13  5.56D-13
4.17D-13  2.78D-13  2.00D-13  1.22D-13  6.23D-14  3.94D-14  2.40D-14
1.35D-14  8.98D-15  5.02D-15
3.97D-72  4.20D-54  1.46D-40  5.35D-30  1.07D-24  2.27D-19  4.53D-15
3.33D-13  8.74D-12  1.17D-10  4.42D-10  1.75D-09  5.52D-09  9.26D-09
1.38D-08  1.89D-08  2.20D-08  2.55D-08  2.80D-08  2.87D-08  2.86D-08
2.78D-08  2.69D-08  2.53D-08
-----
&FILLINFO  NUCCHG=-1, NPARENT=0, SEQ=1, XRMEMB=' ', &END

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