

TRIAC-BATAN

TRISO Analysis Code of BATAN

"Developed by Computational Laboratory, Center for Nuclear Reactor Technology and Safety, BATAN"

Case Title: (describe your problem case here)

TRISO Geometry:

Outer radius	CFP	SiC	IPyC	buffer	kernel	center
[m]	4.60E-04	4.20E-04	3.85E-04	3.45E-04	2.55E-04	0

Uncertainties in geometry and a number of samples:

1.0E-5	1	0.0	2.6E-6	1	0.0	1.0E-5	1	0.0	4.4E-6
	1	0.0	5.0E-6	1	0.0	100			

Properties and Operation Parameters:

SiC Tensile Strength [Pa]	Weibull Modulus	Burnup [FIMA]	"Fission Yield of stable fission gasses, Ff"	Fast Neutron Fluence	Weight ratio of th to U-235 in kernel
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8.34E+08 8.02 0.08 0.31 1.4

Properties and Operation Parameters related with thermal decomposition:

INPUT: Irradiation Temp. Hystory

1	0	593
2	17	833
3	34	1023
4	51	1093
5	68	1123
6	85	593
7	102	833
8	119	1023
9	136	1093
10	153	1123
11	170	593
12	187	833
13	204	1023
14	221	1093
15	238	1123
16	255	593
17	272	833
18	289	1023
19	306	1093
20	323	1123
21	340	593
22	357	833
23	374	1023
24	391	1093
25	408	1123
26	425	593
27	442	833
28	459	1023
29	476	1093
30	493	1123
31	510	593
32	527	833
33	544	1023
34	561	1093
35	578	1123
36	595	593
37	612	833
38	629	1023
39	646	1093
40	663	1123
41	680	593
42	697	833
43	714	1023
44	731	1093
45	748	1123
46	765	593
47	782	833
48	799	1023
49	816	1093
50	833	1123
51	850	593

52	867	833
53	884	1023
54	901	1093
55	918	1123
56	935	593
57	952	833
58	969	1023
59	986	1093
60	1003	1123
61	1020	593

INPUT: Accident Temp. Hystory

1	0.959232614	973
2	1.678657074	934.5384615
3	1.698657074	996.0769231
4	2.637889688	1053.769231
5	3.357314149	1157.615385
6	5.035971223	1253.769231
7	6.23501199	1334.538462
8	7.434052758	1423
9	9.352517986	1492.230769
10	10.79136691	1561.461538
11	12.70983213	1615.307692
12	15.10791367	1661.461538
13	18.22541966	1696.076923
14	24.70023981	1742.230769
15	30.45563549	1765.307692
16	37.41007194	1773
17	43.88489209	1780.692308
18	52.27817746	1769.153846
19	61.63069544	1757.615385
20	70.74340528	1742.230769
21	81.77458034	1723
22	88.72901679	1715.307692
23	97.60191847	1703.769231
24	109.1127098	1692.230769
25	116.5467626	1684.538462
26	130.4556355	1665.307692
27	141.2470024	1649.923077
28	152.2781775	1638.384615
29	164.028777	1623
30	172.6618705	1611.461538
31	181.0551559	1599.923077
32	188.0095923	1592.230769
33	193.2853717	1588.384615
34	198.3213429	1573