

Table of Values 2019

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February 20, 2020

Parameter	Reference	Certainty	Value
Core Inner Radius [cm]	X-energy, Initial NRC meeting	Not Certain	124
Core Outer Radius [cm]	X-energy, Initial NRC meeting	Not Certain	216
Core Inner Height [cm]	X-energy, Initial NRC meeting	Not Certain	966
Core Outer Height [cm]	X-energy, Initial NRC meeting	Not Certain	1150
Top Gap Thickness [cm]	X-energy, Initial NRC meeting	Not Certain	n/a
Bottom Gap Thickness [cm]	X-energy, Initial NRC meeting	Not Certain	n/a
Pebble Inner Radius [cm]	X-energy, Initial NRC meeting	Certain	2.5
Pebble Outer Radius [cm]	X-energy, Initial NRC meeting	Certain	3.0
TRISO Particle Radius [cm]	X-energy, Initial NRC meeting	Certain	0.04225
TRISO Fuel Radius [cm]	X-energy, Initial NRC meeting	Certain	0.02125
TRISO Buffer Radius [cm]	X-energy, Initial NRC meeting	Certain	0.03075
TRISO Inner Pyrolytic Carbon Radius [cm]	X-energy, Initial NRC meeting	Certain	0.03475
TRISO Silicon Carbide Radius [cm]	X-energy, Initial NRC meeting	Certain	0.03825
TRISO Outer Pyrolytic Carbon Radius [cm]	X-energy, Initial NRC meeting	Certain	0.04225
Number of Pebbles	X-energy, Initial NRC meeting	Given as an Approx. Value	220000
Number of Particles per Pebble	X-energy, Initial NRC meeting	Given as an Approx. Value	18000
Packing Fraction	serpent dispersal routine	the pacfrac of the model is calculated by serpent	0.59 [0.53]
U235 Enrichment [wt]	ANS Xe-100 Overview, 2017	Certain	15.5%
UCO Density [g/cc]	Fabrication of Uranium Oxycarbide Kernels for HTR Fuel	Certain	11.0
Helium Density [10E+24/cc]	Calculated using Ideal Gas Law	Calculation	0.0006
Graphite Reflector Density [g/cc]	Ho, Graphite Design	Certain	1.74
Porous Carbon Buffer Density [g/cc]	Using Reflector Data	Certain, if assume same density as reflector	1.74
Pyrolytic Carbon Density [g/cc]	ESPI Metals, Graphite	Certain	2.2
Silicon Carbide Density [g/cc]	Accuratus, Silicon Carbide	Certain	3.1
Core Inlet Temperature [C]	X-energy, Initial NRC meeting	Certain	259.1
Core Outlet Temperature [C]	X-energy, Initial NRC meeting	Certain	750
Core Inlet Pressure [MPa]	X-energy, Initial NRC meeting	Certain	6
Core Outlet Pressure [MPa]	X-energy, Initial NRC meeting	Certain	5.84