	RM-SPECIFICATION **Material : Zirconium (Zr)** **Item Code:** **Purpose : Heat Pellet**	DOCUMENT STATUS **REV** **00**
MATERIAL CODE:	C15 **DOCUMENT NO.**	8

Sno	Description	UOM	Specification
1.	Physical State / Color	-	Solid Powder / Greyish white
2.	Assay Content	%	97
3.	Grade	-	XXX
4.	Mol. Wt.	g/mole	91.22
5.	**Element**	**%**	**Percentage**
a.	active Zirconium (Zr)	**%**	97.00
b.	Hafnium (Hf)	**%**	2.00
c.	Titanium (Ti)	**%**	0.6
d.	Iron (Fe)	**%**	0.4
6.	Melting point	°C	1855
7.	Particle size distribution	µm	4-40 microns
8.	Burning Speed (Zr : $BaCrO_4$ = 45 : 55)	cm/sec	50
9.	Calorific Value (BaCrO4 : Zr = 76 : 24)	cal/gm	430
10.	Supplier	-	China Make (MBC Solar)
11.	MSDS no.	-	XXXX
12.	CAS no.	-	7440-67-7
13.	**Acceptance Criteria**		
a.	Assay Content	%	96±1
b.	Visual Acceptance	-	Greyish white
c.	Burning Speed	cm/sec	>45
d.	Calorific Value (BaCrO4 : Zr = 76:24)	cal/gm	430±2
14.	**Properties to be tested**	**Test Method**	**Test Agency**
a.	Quantitative & qualitative analysis	ICPMS/Titration	NABL, IIT-HYD, CMET
b.	Particle size distribution	PSD	NABL, SRR labs
c.	Burning speed & Calorific value	Bomb Calorimeter	RES, NABL
d.	Specific heat & Thermal Conductivity	DSC/TGA	NABL, IIT-HYD, CMET

PREPARED BY:		REVIEWED & APPROVED BY:

RENEWABLE ENERGY SYSTEMS LIMITED