

## RILEM TG2 – Compaction Protocol Template/ Questionnaire

- Answer questions that apply to your method
- Add additional information that you feel is missing

<b>General Information:</b>		
1	What is the compactor type? What are any other names or aliases?	French Roller Compactor
2	Generally describe the laboratory compactor. <ul style="list-style-type: none"> <li>• How does it work?</li> <li>• Describe any technical terminology used specifically with this equipment</li> </ul>	Rubber tire roller compactor. See EN standards
3	What documents (standard or in-house specifications) are referenced for the use of this machine?	EN 12697-33
4	Provide any information on the Precision and Bias of this procedure.	Not available
5	Provide several digital photos of the compactor.	
6	What do you like about this method?	Nothing in particular
7	What do you dislike about this method?	Nothing in particular
<b>Specimen:</b>		
8	Describe the shape, size and weight of the specimens produced.	Slab of different sizes (mm): <ul style="list-style-type: none"> <li>- 180x500x50 (rutting test)</li> <li>- 180x500x100 (rutting test)</li> <li>- 400x600x150 (modulus and fatigue tests)</li> </ul> The larger slabs for modulus and fatigue tests are slightly trapezoidal to make unmolding easier
9	How do you select compaction temperature?	Compaction temperature is determined depending on binder nature and grade. For experimental binders, viscosity measurements are done.
10	What is the compaction temperature?	Binder dependant. The target is the temperature at which the binder viscosity is 200mPa.s.
11	How long is the conditioning temperature applied?	Typically around 1h (standard says between 45min and 2h30)
12	Are molds preheated? To what temperature? What other tools, etc. are preheated?	Molds are <u>not</u> preheated at compaction temperature
13	How long does the compaction process take?	Around 20min for each sample
<b>Procedure for preparing the sample:</b>		
14	What is the general procedure for compacting samples?	See standard
15	What are the settings required to compact the sample? <ul style="list-style-type: none"> <li>• Pressure or load applied to sample</li> <li>• Angles if applicable</li> <li>• Number of passes or gyrations</li> </ul>	See standard  The number of passes is set depending on gyratory compaction results. The objective here is to obtain a specified void content.
16	Is a pre-inspection of equipment required? (molds – clean, serviceable, etc)	No. Annual verification only.
17	What is the procedure for loading the molds? <ul style="list-style-type: none"> <li>• Is paper (or water)used to prevent material from</li> </ul>	See standard Yes: paper and glycerin oleate (to prevent

	bonding to plates • How are molds loaded? (rodding, tamping, troweling	sticking on molds). Molds are filled by damping in loose hot mix
	<b>Compacted sample</b>	
18	What measurements can be taken of the sample? • Sample height • Pressure readings • Counters for passes and gyrations	All sample dimensions Pressure is verified annually Yes
19	How are the measurements recorded?	hand written
20	How is the sample removed from the compactor and mold? (post-compaction activities)	Samples are unmolded manually with a light hammer. Samples are then used for mechanical testing: rutting or modulus or fatigue tests.
21	How are the volumetric properties determined?	Measurement of specific gravity for all granular cuts and binder. Measurement of sample density through geometric measurements.
22	How is unit mass and density calculated?	Mass is determined by weighing the different components before mixing. Measurement of sample density through geometric measurements.
23	How do you characterize properties of the specimen?	Samples are then used for mechanical testing: rutting or modulus or fatigue tests.
24	Is a graphical presentation (plot) generated?	No.

