

Revision made by NSDA\_25 May 2015

## **QUALIFICATION FILE – CONTACT DETAILS OF SUBMITTING BODY**

### **Name and address of submitting body:**

HCSSC,  
Handicrafts & Carpet Sector Skill Council,  
EPCH House,  
Pocket 6 & 7, Sector C,  
Vasant Kunj,  
New Delhi-110070

### **Name and contact details of individual dealing with the submission**

**Name:** Rajesh Rawat

**Position in the organisation:** Chief Executive Officer

**Address if different from above**

**Tel number(s):** 011-26139834

**E-mail address:** ceo@hcssc.in

### **List of documents submitted in support of the Qualifications File**

1. Qualification Pack
2. RFP for development of Occupational Standards
3. Selection process of the Consultants to develop Occupational Standards
4. Minutes of the meeting of GC meetings
  - i. Composition of the Technical Committee
  - ii. Approval of Occupational Standards by Technical Committee and Governing Council
5. NSDC Human Resource & Skills Requirement in Handicrafts & Carpet Sector
6. Occupational Map & Progression matrix
7. List of QP/NOS validating companies.

## QUALIFICATION FILE SUMMARY

<b>Qualification Title</b>	Mixing Operator (Ceramics) HCS/Q0301		
<b>Body/bodies which will assess candidates</b>	Handicrafts & Carpet Sector Skill Council		
<b>Body/bodies which will award the certificate for the qualification.</b>	Handicrafts & Carpet Sector Skill Council		
<b>Body which will accredit providers to offer the qualification.</b>	Handicrafts & Carpet Sector Skill Council		
<b>Occupation(s) to which the qualification gives access</b>	Mixing and Milling		
<b>Proposed level of the qualification in the NSQF.</b>	3		
<b>Anticipated volume of training/learning required to complete the qualification.</b>	220 hours		
<b>Entry requirements / recommendations.</b>	8th pass		
<b>Progression from the qualification.</b>	Vertical: Mixing and Milling Supervisor Horizontal: Material Mixers - Colouring		
<b>Planned arrangements for RPL.</b>	RPL arrangements and policies are under development. The guidelines should be ready in 2-3 months.		
<b>International Comparability</b>	Not yet established		
<b>Formal structure of the qualification</b>			
<b>Title of unit or other component</b> (include any identification code used)	<b>Mandatory/ Optional</b>	<b>Estimated size (learning hours)</b>	<b>Level</b>
HCS/N0301 Perform mixing using equipment	Mandatory	40	3
HCS/N0302 Perform manual mixing	Mandatory	40	3
HCS/N9901 Coordinate with colleagues and work as a team	Mandatory	20	Common across 1-5 levels
HCS/N9902 Maintain safe work environment	Mandatory	40	Common across 1-5 levels
HCS/N9903 Maintain personal health	Mandatory	40	Common across 1-5 levels
HCS/N9904 Basic business management	Mandatory	40	Common across 1-5 levels

Please attach any document giving further detail about the structure of the qualification – eg a Curriculum or Qualification Pack.

Give details of the document here:

- Qualification Pack is attached as Annexure 1

## **SECTION 1**

### **ASSESSMENT**

**Name of assessment body:**

If there will be more than one assessment body for this qualification, give details.

Assessment bodies are in the process of affiliation.

**Will the assessment body be responsible for RPL assessment?**

Yes

Give details of how RPL assessment for the qualification will be carried out and quality assured.

RPL will be based on the same approved Qualification Pack and Assessment Criteria mentioned in the Qualification Pack.

The process of RPL assessment is under development.

**Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, consistent and fair and show that these are in line with the requirements of the NSQF:**

The assessment strategy is under development.

Please attach any documents giving further information about assessment and/or RPL.

Give details of the document(s) here:

### **ASSESSMENT EVIDENCE**

**Complete the following grid for each grouping of NOS, assessment unit or other component as per the assessment criteria. Insert the required number of rows.**

**CRITERIA FOR ASSESSMENT OF TRAINEES**

**Job Role : Mixing Operator (Ceramics)**

**Qualification Pack : HCS/Q0301**

**Sector Skill Council : Handicrafts & Carpet Sector Skill Council**

**Guidelines for Assessment:**

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below)
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criteria
5. To pass the Qualification Pack , every trainee should score a minimum of 70% in every NOS
6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.

<b>Assessable Outcomes</b>	<b>Assessment Criteria</b>	<b>Total Marks</b>	<b>Out Of</b>	<b>Theory</b>	<b>Skills Practical</b>
<b>HCS/N0301: Perform mixing using equipment</b>	PC1. identify the raw materials for the making the slip like quartz, feldspar, ball clay, etc	<b>100</b>	3	1	2
	PC2. differentiate the different materials in the storage		2	0	2
	PC3. collect the raw materials in appropriate/prescribed quantities		3	1	2
	PC4. load/instruct the loaders to carefully load the raw materials into the ball mill using the appropriate tools		3	1	2
	PC5. Set aside the raw materials carefully for further usage		3	1	2
	PC6. return the excess raw materials to the appropriate storage locations		3	1	2
	PC7. operate the ball mill to mix the loaded raw materials		5	1	4
	PC8. observe if the overall mixing process is going according to the specifications		3	1	2
	PC9. ensure the mixed slurry from the ball mill moves to the next stage of production to the blunger		5	1	4
	PC10. ensure that the blunger is calibrated appropriately		6	1	5

	PC11. observe if the slurry is mixed appropriately in the blunger		4	1	3
	PC12. ensure that the slurry is loaded into the filtering equipment		4	1	3
	PC13. ensure that the filtering equipment is calibrated to absorb sufficient amount of water from the slurry to make the 'paste' for further production stages		5	1	4
	PC14. collect the 'paste' from the filtering press to be fed into pug mill for further processing		5	1	4
	PC15. calibrate the pug mill to absorb all unwanted moisture		6	1	5
	PC16. load the paste into the pug mill in appropriate quantities		5	1	4
	PC17. operate the pug mill appropriately to ensure the slip comes out of it		5	1	4
	PC18. collect the slip from the pug mill and keep it aside for further processing		2	0	2
	PC19. maintain the equipment and ensure smooth operation		3	1	2
	PC20. ensure the equipment are switched off at the appropriate time		3	1	2
	PC21. clean the area after the mixing		3	1	2
	PC22. able to visually examine the raw materials for purity		3	1	2
	PC23. load the raw materials as per recommended procedure to ensure no unwarranted spillage and slippage		3	1	2
	PC24. mix the products in line with the production schedules		3	1	2
	PC25. ensure that there is no wastage of the materials		3	1	2
	PC26. ensure there are no process delays as mixing is the first step for further processing		4	1	3
	PC27. able to visually examine the entire process of mixing to see if it is adhering to the usual production schedule		3	1	2
		<b>Total</b>	<b>100</b>	<b>25</b>	<b>75</b>
<b>HCS/N0302:</b>					
<b>Perform manual mixing</b>	PC1. identify the raw materials for the making the slip like quartz powder, green or white glass powder, fuller's earth/multani mutti, katira/banyan tree gum, sazzi mitti/sodium sulphate, water	<b>100</b>	5	1	4
	PC2. differentiate the different materials in the storage		4	1	3

	PC3. collect the raw materials in appropriate/prescribed quantities		5	2	3
	PC4. prepare each ingredient appropriately for the next stage of mixing like crushing, etc		7	2	5
	PC5. set aside the raw materials carefully for further usage		3	1	2
	PC6. return the excess raw materials to the appropriate storage locations		3	1	2
	PC7. use tools like chakki/stone pulveriser to grind the raw materials that require the grinding		7	2	5
	PC8. grind the raw materials to the right size to ensure the slip can be formed		7	2	5
	PC9. add appropriate quantity of water after the grinding to the raw materials		7	2	5
	PC10. manually mix the raw materials along with water to form the slip		7	2	5
	PC11. ensure that slip is malleable		4	1	3
	PC12. clean the area after the mixing		4	1	3
	PC13. able to visually examine the raw materials for purity		5	2	3
	PC14. mix the products in line with the production schedules		5	2	3
	PC15. ensure that there is no wastage of the materials		6	2	4
	PC16. ensure that the materials are ground finely		5	1	4
	PC17. achieve periodical targets set by the supervisor		6	2	4
	PC18. ensure there are no process delays as mixing is the first step for further processing		5	2	3
	PC19. ensure all time availability of materials and coordinate with stores for adequate inventory		5	2	3
		<b>Total</b>	<b>100</b>	<b>31</b>	<b>69</b>
<b>HCS/N9901: Coordinate with colleagues and work as a team</b>	PC1. receive job order and instructions from reporting supervisor	<b>100</b>	4	3	1
	PC2. understand the work output requirements, targets, performance indicators and incentives		5	4	1
	PC3. deliver quality work on time and report any anticipated reasons for delays		5	1	4
	PC4. report on any grievances, production defects and any potential hazards		4	2	2

PC5. communicate on process flow improvements	4	2	2
PC6. communicate maintenance and repair schedule proactively to the supervisor	4	1	3
PC7. receive feedback on work standards	4	2	2
PC8. interact and clarify doubts on design, usage of materials & tools, quality & standards compliance, etc	5	2	3
PC9. report in time for shortage or need of raw materials	4	1	3
PC10. handover completed work to supervisor	4	2	2
PC11. communicate to the colleagues from within and other departments, clearly and effectively on all aspects to carry out the work among the team	5	2	3
PC12. maintain the etiquettes, use polite language, demonstrate responsible and disciplined behaviours to the colleagues	5	2	3
PC13. interact with colleagues from different functions and understand the nature of their work	4	2	2
PC14. put team over individual goals and multi task or share work where necessary supporting the colleagues	4	2	2
PC15. resolve conflicts and ensure smooth workflow	4	1	3
PC16. interact and understand the production requirement for the day from the previous and successive processing department and work accordingly	4	1	3
PC17. communicate and discuss work flow related difficulties in order to find solutions with mutual agreement	4	1	3
PC18. receive feedback from Quality Control and rework in order to complete work on time	5	1	4
PC19. share information with colleagues to enable efficient delivery of work	6	3	3
PC20. highlight any errors of colleagues, help to rectify and ensure quality output	4	2	2
PC21. work with cooperation, coordination, communication and collaboration, with shared goals and supporting each other's performance	4	1	3
PC22. document all the details accurately relating to one's role as required	4	1	3



	PC23. report on the work completed and keep it in records		4	1	3
		<b>Total</b>	<b>100</b>	<b>40</b>	<b>60</b>
<b>HCS/N9902: Maintain safe work environment</b>	PC1. comply with safety procedures while on work to prevent accidents	<b>100</b>	8	2	6
	PC2. take adequate safety measures while handling materials, chemicals and tools		8	2	6
	PC3. wear appropriate personal protective gears such as gloves, protective goggles, masks etc. while working		8	2	6
	PC4. undertake basic safety checks before operation of all tools and electrical equipment		9	2	7
	PC5. wear appropriate and recommended clothing as per the work environment (eg: working in a furnace area )		9	2	7
	PC6. follow recommended material handling procedure to control material and personal damage		8	2	6
	PC7. perform all procedures as per company's work instructions for controlling operational risk		8	4	4
	PC8. perform the duties in a manner which minimizes environmental damage		6	2	4
	PC9. dispose of waste safely and correctly in a designated area as per company's SOP		8	2	6
	PC10. report any accidents, incidents or problems without delay to the supervisor and take necessary immediate action to reduce further danger		8	4	4
	PC11. ensure zero accident at workplace		10	2	8
	PC12. adhere to safety standards and ensure no material damage		10	2	8
		<b>Total</b>	<b>100</b>	<b>28</b>	<b>72</b>
<b>HCS/N9903: Maintain personal health</b>	PC1. always cover the mouth and nose with a dust mask while working and keep on changing when it gets blocked with dust	<b>100</b>	12	4	8
	PC2. follow work instructions strictly to reduce the amount of pollution at the work place e.g. wet the rock / craft material before working on it		10	2	8
	PC3. wear protective goggles over eyes and replace them when scratches on it obscure the vision		10	2	8
	PC4. wear gloves as per the materials used for making handicraft to avoid blisters; scratches and cuts		10	2	8

	PC5. undergo preventive health checkups at regular intervals		10	2	8
	PC6. take prompt treatment from the doctor in case of illness		11	3	8
	PC7. follow SOPs for dealing with blisters; scratches; accidental fires or any other type of emergencies at work		11	4	7
	PC8. ensure no productivity loss or absenteeism from work due to illness		13	3	10
	PC9. ensure no long term ill effect on the personal health		13	3	10
		<b>Total</b>	<b>100</b>	<b>25</b>	<b>75</b>
<b>HCS/N9904: Basic business management</b>	PC1. allot work to the employees of the unit according to their skill and experience	<b>100</b>	3	1	2
	PC2. train the employees of his/her unit with the appropriate skills required to make market relevant and quality products		3	1	2
	PC3. motivate the employees		2	1	1
	PC4. handle the grievances/issues that are raised by the employees		2	1	1
	PC5. manage the employee expectations		2	1	1
	PC6. gather and analyze the cues from the market		2	1	1
	PC7. ascertain the customer preference		3	1	2
	PC8. create product lines based on current market preference		3	1	2
	PC9. create product lines that are unique and able to price high		3	1	2
	PC10. price the products according to market trends		3	1	2
	PC11. decide the best way to market the product lines		3	1	2
	PC12. make a list of raw materials required according to the product lines		2	0	2
	PC13. ascertain the quantity and right price to procure the materials		3	1	2
	PC14. identify the right locations/agents from where the raw materials can be procured		3	1	2
	PC15. negotiate to get the best price		3	0	3
	PC16. ensure quality materials are procured		4	1	3
	PC17. ensure the procured materials are stored in appropriate conditions		3	1	2
	PC18. maintain the bills and record the prices of procurement for future reference		3	1	2
	PC19. maintain healthy vendor relationships		3	1	2

PC20. identify the nearest market	3	1	2
PC21. analyze the prevalent price for product lines	3	2	1
PC22. decide on the most effective means to access the market	2	1	1
PC23. plan for cost effective transportation to the market	3	1	2
PC24. position the product according to market requirements	3	1	2
PC25. manage customer expectations	2	0	2
PC26. analyze and ascertain the cost of production	3	1	2
PC27. maintain the book of accounts related to the business	3	1	2
PC28. own and operate a bank account	4	2	2
PC29. identify cost effective means of running business	3	1	2
PC30. identify various aspects of business that require recording	3	2	1
PC31. create formats for recording	3	2	1
PC32. make various records pertaining to all aspects of business	3	2	1
PC33. maintain these records with periodic updation	3	2	1
PC34. maintain necessary documents as per local government and regulatory requirement	3	2	1
PC35. analyze the records and glean various trends from the same	3	2	1
<b>Total</b>	<b>100</b>	<b>40</b>	<b>60</b>

## SECTION 2

### EVIDENCE OF NEED

#### **What evidence is there that the qualification is needed?**

While collecting data from the companies for the occupational map, we also took feedback from industry, which was collected with respect to roles for which qualification packs development, was to be prioritized. This was largely based on volume of people required, quantitative and qualitative shortfall which the Industry feels they face. Governing council of HCSSC gave final approval and endorsement for the same.

#### **What is the estimated uptake of this qualification and what is the basis of this estimate?**

Employed in the role: 743; Estimate uptake 600 based on requirements for existing and prospective workforce on the basis of Skills Gap analysis Reports and validation of skill gap study through feedback from industry for demand. An LMIS development initiative is being put in place to be more precise regarding the

demand and supply

**What steps were taken to ensure that the qualification(s) does/do not duplicate already existing or planned qualifications in the NSQF?**

- NSDC list of Approved and Under-Development QPs was checked prior to commissioning the work

**What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated?**

- Agencies have been appointed by the SSC to interact with training providers to gather feedback in implementation.
- Monitoring of results of assessments
- Employer feedback will be sought post-placement
- A formal review is scheduled in two year time i.e. 2017

Please attach any documents giving further information about any of the topics above.

Give details of the document(s) here:

- NSDC Human Resource & Skills Requirement in handicrafts & Carpet Sector

### **SECTION 3**

#### **SUMMARY OF DIRECT EVIDENCE OF LEVEL**

Justify the NSQF level allocated to the QP. Relate information about the job role and build upon the five descriptors for the level to justify.

Health and safety, Work effectively and a basic business management are common for all roles from NSQF levels 1-5 and cover the minimum in a workplace.

Level 3

<b>Mixing operator (Ceramics)</b>					<b>HCS/Q0301</b>
<b>Process required</b>	<b>Professional Knowledge</b>	<b>Professional Skills</b>	<b>Core Skills</b>	<b>Responsibility</b>	<b>Level</b>
The incumbent carries out a job which requires limited range of activities, routine and predictable which in this case are around Mixing raw materials manually or using a mill	The incumbent needs basic facts, process and principle applied in trade of employment in this case is of glazing and preparation of ceramics.	The skills required for the job involve recall and demonstration of practical skill, which is routine and repetitive in narrow range of	The incumbent requires communication skills written and oral, with minimum required clarity, skill of basic arithmetic	The incumbent works largely on instruction from supervisor and laid down procedures. The incumbent also has some	3

<p>machine in manufacturing of ceramic items. The examples for the same include tasks such as</p> <ul style="list-style-type: none"> <li>• load/instruct the loaders to carefully load the raw materials into the ball mill using the appropriate tools</li> <li>• operate the ball mill to mix the loaded raw materials</li> <li>• collect the 'paste' from the filtering press to be fed into pug mill for further processing</li> <li>• calibrate the pug mill to absorb all unwanted moisture</li> <li>• load the paste into the pug mill in appropriate quantities</li> <li>• operate the pug mill appropriately to ensure the slip comes out of it</li> </ul> <p>The Qualification is not at level 4 since all work is as per routine and there is no clear choice.</p> <p>It is not level 2 as the incumbent needs understanding and apply the same.</p>	<ul style="list-style-type: none"> <li>• basic chemical properties of various raw materials used</li> <li>• basic proportions of materials that can be used to make the mixture</li> <li>• the general way to mix the materials effectively</li> <li>• the recommended storage methodology for the raw materials</li> <li>• the science behind how the various raw materials coalesce to form the ceramics slip</li> <li>• handling the raw materials appropriately</li> </ul> <p>Factual Knowledge of Field of knowledge of study is not required for this level, therefore not level 4.</p>	<p>application.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• load the raw materials as per recommended procedure to ensure no unwarranted spillage and slippage</li> <li>• mix the products in line with the production schedules</li> <li>• prepare each ingredient appropriately for the next stage of mixing like crushing, etc.</li> <li>• manually mix the raw materials along with water to form the slip</li> <li>• able to visually examine the raw materials for purity</li> <li>• mix the products in line with the production schedules</li> </ul> <p>This is not at level 4 as there are no tools apart from a simple repetitive action chakki/stone pulveriser and a loading shovel. Also there is no need for quality concepts but only simple parameter compliances as given above.</p>	<p>and algebraic principles including understanding of basic financial transactions.</p> <p>These are required for the following tasks:</p> <ul style="list-style-type: none"> <li>• calibrate the pug mill to absorb all unwanted moisture</li> <li>• mix the products in line with the production schedules</li> <li>• collect the raw materials in appropriate/p rescribed quantities</li> </ul>	<p>responsibility for work including for delivery on time and as per schedules standards, but beyond that is not accountable.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• achieve periodical targets set by the supervisor</li> <li>• receive job order and instructions from reporting supervisor</li> <li>• communicate maintenance and repair schedule proactively to the supervisor</li> <li>• receive feedback on work standards</li> <li>• interact and clarify doubts on design, usage of materials &amp; tools, quality &amp; standards compliance, etc</li> </ul> <p>Given the limited scope of responsibility for own learning and work this cannot be deemed as Level 4.</p>	
3	3	3	3	3	

**OTHER EVIDENCE OF LEVEL** [This need only be filled in where evidence other than primary outcomes was used to allocate a level] (**Optional**)

Summary of other evidence (if used):

nil

## **SECTION 4**

### **EVIDENCE OF RECOGNITION OR PROGRESSION**

**What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?**

- Horizontal and vertical mobility options have been articulated in occupational map
- Vertical: Mixing and Milling Supervisor; Horizontal: Material Mixers - Colouring

Please attach any documents giving further information about any of the topics above.

Give details of the document(s) here:

- Occupational Map and progression matrix

### **List of companies validated the QP**

S. No	Name of the Organisation	Contact Person	Employee - Size
1	B.L.Ceramic Industries	Sami Ahmad Khan	Small
2	Blue Art Flower Vases works	SP Dadoo	Small
3	Dadoo Industries	Naman Dadoo	Small
4	Krishna Ceramics	Khalid Ahmad	Small
5	Chhabra & Sons	Mohd. Yusuf Khan	Small
6	Gopal Grinding Mills	Hari Dadoo	Small
7	Chhabra Industries	Mohd. Abdiul Raheem Khan	Small
8	Central glass & ceramic research institute	Dr. LK Sharma	Medium
9	Neerja International		Large
10	Minhas Pottery	Rajesh Kumar Tomar	Large
11	Chhatwal Ceramics	Vineet Sharma	Large
12	Silico & Chemico Porcelain Works	Darshan Chhatwal	Large

Further contact details and a copy of the validation are submitted both with NSDC and NSDA