

****

****

**Sample Test Project**

**State Skill Competitions**

**Skill- Car Painting**

*Category: Transportation & Logistics*

**Table of Contents**

[**A. Preface 3**](#_Toc500338550)

[**B. Test Project 4**](#_Toc500338551)

[**C. Marking Scheme 5**](#_Toc500338552)

[**D. Infrastructure List 6**](#_Toc500338553)

[**E. Instructions for candidates 7**](#_Toc500338554)

[**F. Health, Safety, and Environment 8**](#_Toc500338555)

**Section - A**

# **A. Preface**

**Skill Explained:**

Car painters work in various work environments from an Auto body repair shop to an aircraft hangar, are responsible for reinstating the pre-accident paint finish to cars after the structure and/or the panels have been repaired or replaced. They may also be asked to completely repaint a whole vehicle either to change its colour or reinstate its newness. Car painters may also become involved in matching colours to an original colour no longer available or to colours that prove difficult to match. A car painter must match the colour, shade, and texture of the adjoining panels that are not being painted. They can also carry out minor panel repairs and apply undercoats, colour coats, and clear sealant coats which provide the high gloss levels required.

**Eligibility Criteria (for IndiaSkills 2018 and WorldSkills 2019):**

Competitors born on or after 01 Jan 1997 are only eligible to attend the Competition.

**Total Duration: 4:30 Hrs**

**Task A :** 180 Minutes

**Task B :** 90 Minutes

**Section - B**

# **B. Test Project**

**Task A – Standard Paint Application – Outside Door Area (2 Layer)**

**Competitor Instruction Sheet**

You have **180 Minutes** to complete this task

1. Small dent on the panel will be given on the new ED coated door and competitor must repair the damage with the help of relevant Tools & equipments and fillers like polyester putty and then entire panel (Outside only – up to the hamming line) must be primed with primer surfacer and further it must be sanded well to make ready for base coat. After the preparation competitor, must apply correct Base coat and Clear coat on the outside of the panel.
2. Inside area need to mask to make sure paint are applied in the designated area only and no over spray beyond the masking line indicated.
3. Dry Film Thickness (DFT) of primer surfacer should be within the range given by Paint Supplier as per Technical data sheet (TDS).
4. Panel should be painted in the vertical position.

**Task B – Plastic Bumper Repair**

**Competitor Instruction Sheet**

You have **90 Minutes** to complete this task

1. You have 1.5 hrs to complete the task
2. Pre-painted bumper with small scratch of 100 mm will be given to competitor. Competitor must prepare the scratch and fill the putty to level the surface. Further, the competitor must sand the putty and apply primer surfacer and prepare for base coat by sanding the primed and non-primed area.
3. Stop and have your work judged by the Jury.

**Section – C**

# **C. Marking Scheme**

**Marking Scheme:** The Assessment is done by awarding points by adopting two methods, Measurement and Judgments

* Measurement - One which is measurable
* Judgment - Based on Industry expectations

Aspects are criteria’s which are judged for assessment.

**Example-Judgment Marking**

If maximum marks for Judgement criteria is 1 and if all 3 Experts (Juries) give 3 points to a candidate, the candidate will get 1 mark for that aspect. If 2 Experts give 3 and 1 Expert gives 2 points, then candidate will get (3+3+2)/9\*1 = 0.89 marks for that aspect out of 1 mark.

**The Marking Scheme of the mentioned Tasks is attached in Annexure - 1**

1. Standard Paint Application
2. Plastic Bumper Repair

**Section - D**

# **D. Infrastructure List**

**Equipment / Tools:**

|  |  |  |
| --- | --- | --- |
| **S.No** | **Tools & Equipments** | **Quantity** |
| 1 | Paint Booth setup | 1 |
| 2 | Infra-Red Dryer | 2 |
| 3 | Putty applicator knife | 10 pcs |
| 4 | Plate for Putty Mixing | 5 pcs |
| 5 | Dust Extraction Sanding Machine: 3M , Mirka | 2 |
| 6 | Hand Blocks (Small & medium) 3M, Mirka | 5 each set |
| 7 | Sanding paper Disc – P80, P120, P180, P320, P400, P500, P600 | 30 pcs each |
| 8 | Sanding paper Sheet P80, P120, P180, P320 | 20 pcs each |
| 9 | Scotch Brite Grey | 1 Pcs per Competitor |
| 10 | Scotch Brite Purple | 1 Pcs per Competitor |
| 11 | HVLP Spray Gun for Primer Surfacer | 4 |
| 12 | HVLP Spray guns for Base coat | 4 |
| 13 | HVLP Spray Guns for Clear Coat | 4 |
| 14 | Spray Gun cleaning unit | 1 |
| 15 | Stands for Paintings | 5 |
| 16 | Table for work stations | 5 |
| 17 | Pressure Gauge for Spray Guns | 4 |
| 18 | SATA RPS Cups 0.6 L - 200 Mic/3M PPS | 50 |
| 19 | Spray Gun Coupler | 4 |
| 20 | DFT Meter | 1 |
| 21 | Mixing Scale for Colour mixing | 5 |
| 22 | Weigh Balance | 2 |
| 23 | Cleaning / Degreasing Cloth | 50 |
| 24 | Tack Cloth | 15 |
| 25 | Masking paper – Brown | 1 Roll |
| 26 | Making tape – 1 inch | 20 Pcs |
| 27 | Fine Line Masking Tape -9 mm | 10 Pcs |
| 28 | Dry Guide coat | 5 |
| 29 | Panels: Door ED coated | 15 |
| 30 | Plastic Bumper – Pre-Painted | 7 |

**Consumables:**

|  |  |  |
| --- | --- | --- |
| **S.No** | **Consumables** | **Quantity** |
| 1 | Degreasers (Silicone Remover) | 5 ltr |
| 2 | Polyester putty with Hardener for Plastic | 4 Kg |
| 3 | Polyester putty with Hardener for Metal surface | 2 kg |
| 4 | 2K Primer Surfacer fast drying (Grey) | 4 ltr |
| 5 | 2K Hardener for Primer surfacer | 2 ltr |
| 6 | 2K Thinner | 10 ltr |
| 7 | Solvent Borne Tints and Binder for making colour | 5 ltr |
| 8 | Fast drying Clear | 5 ltr |
| 9 | Hardener for Clear | 2 ltr |
| 10 | Gun cleaning NC thinner | 10 ltr |

**Safety Items:**

|  |  |  |
| --- | --- | --- |
| **S.No** | **Items** | **Quantity** |
| 1 | Solvent Vapor mask / | 1 per tech |
| 2 | Air fed mask | 1 per tech |
| 3 | Dust mask | 1 per tech |
| 4 | Cotton Hand Gloves | 1 per tech |
| 5 | Rubber hand Gloves | 1 per tech |
| 6 | Ear plugs | 1 per tech |
| 7 | Pair of Safety Shoes | 1 per tech |
| 8 | Pair of Safety Glasses | 1 per tech |
| 9 | Anti-Static Cloth for Paint Spraying | 1 per tech |
| 10 | Uniform | 1 per tech |

**Section – E**

# **E. Instructions for candidates**

1. Candidate must wear the prescribed Personnel Clothing while performing the task and ensure safety of equipment and personnel’s working around his workstation.
2. The Competitor must use the following Personal Protective Equipment:
   * Dust Protection mask;
   * Solvent resistant Gloves;
   * Safety glasses;
   * Ear protection;
   * Safety shoes
   * Dust free overall with hood
   * Solvent Vapor Resistant mask
   * Safety measures have to be taken at the workstation (extractors for dry sanding and spraying);
   * Safety procedures must relate to the paint sponsors data sheets
3. Candidate should remain present at the Competition venue 30 min before start of work
4. Each candidate would be allotted a specific time to complete the task, no further extension would be given to anyone unless specified by Jury.
5. Candidates must follow the instructions given by Jury.
6. Candidate must dispose-off the environmentally harmful products carefully.
7. Candidate must adhere to the MSDS (Material Safety Data Sheets) provided by the paint manufacturer.
8. In case of any difficulty the candidate must seek support of Jury members.

**Section – F**

# **F. Health, Safety, and Environment**

1. All accredited participants, and supporting volunteers will abide by rules and regulations with regards to Health, Safety, and Environment of the Competition venue.
2. All participants, technicians and supporting staff will wear the required protective personnel clothing.
3. All participants will assume liability for all risks of injury and damage to property, loss of property, which might be associated with or result from participation in the event. The organizers will not be liable for any damage, however in case of Injury the competitor will immediately inform the immediate organizer for medical attention.

**Annexure -1**

**Skill Name:** Car Painting **Competitor Name:** \_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |
| --- | --- | --- |
| **Task** | **Criteria** | **Marks** |
| A | Standard Paint Application | 70.00 |
| B | Plastic Bumper Repair | 30.00 |
|  | **Grand Total** | **100.00** |



