

Manufacturing Instruction:

Commando Interior Acrylic Paint



Circulation:

HOD R&D
HOD Manufacturing
Unit Heads
Unit Process & QC Heads

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| Amar Santra | Indrajit Banerjee | Tapan Dhar | Tapan Dhar |

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A. Equipment Required

1. TSD & Mixing tank fitted with variable speed controller.
2. Stainless Steel vessel for easy cleaning
3. Digital display of RPM & Amperage
4. Accurately working flow meter for water, emulsion and any other liquid RM used in bulk quantity

B. Safety Precautions

1. Use personal safety equipment (gloves, goggles and mask) while handling the raw materials.
2. The pigments used are light and must be handled wearing all necessary personal protective equipment during charging.
3. C060, Z555 & Q500 are skin irritant. Avoid contact with skin.
4. Observe general manufacturing safety rules and regulations throughout the manufacturing process.
5. Refer to MSDS of individual RM for further details.

C. Process Precautions

1. Read the formulation and manufacturing instruction guide line before processing batch.
2. Calculate mill base volume of the formulation and select TSD/Mixing Tank accordingly. This will ensure optimum performance of all raw materials and easy processing of the batch.
3. Clean TSD so as to make it free of any contamination from previous batch.
4. **COMMANDO INTERIOR ACRYLIC PAINT IS CLAIMED AS GOOD FLOW & SMOOTH FINISH. DO NOT PROCESS IN PUG MILL.**
5. *White & colour bases may be processed in TSD, Mixing Tank after corresponding bases of Distemper.*
6. Ensure variable speed controller is working and digital displays of rpm and ampere meter, load cell & flow meters are showing accurate readings.
7. Pipe lines are clean and without clogging or microbial contamination. Check microbial growth in pipeline, bends, joints etc. by inspecting swabs at regular intervals.
8. Ensure filling line is clean; check swabs for microbial contamination at regular intervals.
9. In case of manual handling of liquid raw materials, take each of them in separate dry pails. Do not mix any two raw materials in a single pail.

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Commando Interior Acrylic Paint White and Regular Bases

(White, PO Base & W1 Base)

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(applicable for White, PO base, W1 base)

A. Premix

1. Take a clean TSD.
2. Take water. Start the scrapper.
3. Add Z555 and mix well.
4. Add Q369 and mix well.
5. Add Q410 slowly and mix well for 15-20 min for complete gel formation.
6. Add stage RMs – Q443, Q519 etc. one by one and mix well for 10 min.
7. Use HSD in case required for mixing.

B. Pigment Dispersion

1. Add pigments, extenders one grade at a time and mix well before adding the next grade.
2. Once pigment addition is complete wash walls of TSD with minimum water.
3. Run high speed impeller at 1000-1100 rpm for 35-40 min to get a uniform dispersion.
4. **At no point of time during dispersion the mill base temperature should go beyond 50°C.**

C. Check Dispersion

1. Check dispersion
2. If dispersion is achieved, thin the mill base with water and mix well.

D. Stabilization

1. Add stage RM (Q500, Z555 etc.) one by one and mix well for 15-20 min using scrapper or HSD for a small time if required.
2. Add stage Q519 and mix well for 10 min.
3. Add stage RM-C060 and mix properly.

E. Let down

1. Ensure that mixing tank is free of any contamination.
2. Take EW07 in Mixing Tank.

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3. Add mill base to emulsion while the stirrer is on.
4. Mix for 10-15 min.
5. Add other stage additives (Q446, Q101, and C060) one by one and mix well for another 15-20 min.

F. Adjustment

1. Take a clean bucket/ barrel and to it add stage quantity of Q558 and water in the ratio 1:3 by weight. Mix well
2. Add the mixture of Q558-water to the mixing tank.
3. Mix well for 10-15 min.

G. Sampling

- a. Check constants
- b. Sample to QC

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**Commando Interior Acrylic Paint
Coloured Bases
(Ivory, Blue & Green)**

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Manufacturing Instruction: Commando Interior Acrylic Paint Coloured Bases

A. Premix

1. Take a clean TSD.
2. Take water. Start the scrapper. Add Z555 and mix well.
3. Add Q369 and mix.
4. Add Q386 slowly under mixing and form a uniform smooth gel.
5. Add stage additives-Q443, Q519 etc. and run for 10 min.
6. Start scrapper and mix the ingredients homogeneously.

B. Pigment Dispersion

1. Add pigments, extenders one grade at a time and mix well before adding the next grade.
2. Once pigment addition is complete wash walls of TSD with minimum water.
3. Run high speed impeller at 1000-1100 rpm for 35-40 min.
4. **At no point of time during dispersion the mill base temperature should go beyond 50°C.**

C. Check Dispersion

1. Check dispersion
2. If dispersion is achieved, thin the mill base with water and mix well.

D. Stabilization

1. Add stage RM -Z555 and mix well for 15-20 min using scrapper or HSD for a small time if required.
2. Add stage RM Q519 and mix well for 10 min.
3. Add C060 and mix properly.

E. Let down

1. Ensure that mixing tank is free of any contamination.

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2. Take EW07 in Mixing Tank.
3. Add mill base to emulsion while the stirrer is on.
4. Mix for 10-15 min.
5. Add other stage additives (Q446, Q490) one by one and mix well for another 15-20 min

D. Tinting

Add tinter to match the standard.

E. Adjustment

Add Q558 with stage water and mix well for 10 min.

F. Sampling

1. Check constants
2. Sample to QC

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