



ENGINEERING STANDARDS

Material Specification

LIMITED USE
HN2430

Surface Preparation Prior to Painting of Exterior Polypropylene/EPDM Plastic Parts Do Not Use on New Programs; No Replacement

1. INTRODUCTION

This specification covers the minimum performance and processing requirements for the approval of surface preparations used for exterior polypropylene/EPDM plastic mouldings painted by HPO (Holden Plastics Organisation). The materials and processes used in surface preparation must be qualified as a full system.

2. REFERENCES

HN 2431 HN 1000

3. APPLICATION

3.1 Surface preparation for general use on exterior polypropylene/EPDM parts.

3.2 Polypropylene/EPDM substrates used for testing and approved to this specification shall be as specified on the part drawing.

4. GENERAL REQUIREMENTS

4.1 Full System Approval

A full system is defined by the types of chemicals, paint and their combinations to be used in the surface preparation and painting process.

4.2 Paint Materials and Process

As nominated for each approved paint source.

4.3 Minimum In-Process Testing

The process used to clean components shall be such that the subsequent painted part conforms to all requirements of HN 2431. In-process testing to ensure conformance shall be the responsibility of the supplier.

4.4 General Processing Requirements

- i) Surface preparation (cleaning) must be performed prior to all painting operations. Handling after surface cleaning is not allowed.
- ii) The surface shall exhibit a continuous water film (water break free) immediately after the final deionised water rinse (DI) and before drying.
- iii) After the final dry off, the surface shall be free of water spots and other visible surface contamination.

4.5 Minimum Processing Conditions

Stage	Function	Time of Stage (s)	Concentration (%)	Temperature (°C)	Pressure (psi)	Conductivity (µS)
1	Preclean	> 30	-	amb - 67	10 - 30	-
2	Chemical Wash	> 60	1-5	57 – 67	10 - 30	-
3	Recirc Rinsing	> 60	-	amb – 60	10 - 30	-
4	Recirc Rinsing	> 60	-	amb – 60	10 - 30	< 50
5	Recirc DI with Rinse Aid	> 30	0.03-0.07	amb – 40°C	10 - 30	< 10
5A	Virgin DI Rinse with Rinse Aid	Double Halo	0.03-0.07	amb	10 - 30	< 5

Note: The pH of the virgin DI rinse must be 5.0 - 7.0.

5. TESTS

5.1 Test Program

Test panels of nominal dimensions 100 x 100 x 2.5 mm injection moulded from the polypropylene/EPDM grade shown on the part drawing are to be prepared as follows.

- i) Age all test panels for 72 hours ambient before testing unless otherwise specified.