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	Paint & Varnish Compatible Test	19/04/07	3.00	1 of 3	TM013

Reason For revision: Updated to stop using Chloroform as the test transport medium and replace with Acetone.

1. PURPOSE


- 1.1 To define the methods, materials and surfaces used in the *paint and varnish compatible* test. This test establishes whether a belt can be used with painted or varnished surfaces without causing a defect to develop.
- 1.2 The purpose for the test is to determine if the test subject (belt or raw material) emits substances which may cause flaws on a painted / varnished surface, i.e. is the subject compatible to be used where newly painted surfaces exist?
- 1.3 This procedure also specifies the frequency the test will be performed.

2. SCOPE

- 2.1 This test applies to synchronous belts specifically manufactured for applications or processes that could come into contact with painted or varnished areas where contamination of product from any source must be avoided (trade name: - Power Paint) .
- 2.1 The source of these contaminants on painted surfaces, which could come into contact with finished belts, has been seen to come from many substances. This test is **NOT** a chemical test to determine which substance is present, but only to determine if the substances present could be the cause of the any such flaw appearing. This test can only be regarded as a quick indicative test, not an analysis of substances.
- 2.2 Materials that may cause flaws on a painted surface include: *Silicone release agent, Paraffinic waxes and Greases & oils*. Other materials that may cause flaws have so far not been identified or tested.

3. RESPONSIBILITY

- 3.1 The Product Engineering Technologist, through the appropriately trained personnel, is responsible for the details and application of this test method and for overseeing any re-testing of product should a non-conformance be identified.

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3.3 It is the responsibility of the Quality Assurance Shift Facilitator to carry out the test and release process as outlined in this method and to highlight any non-conforming product to the Product Engineering Technologist.

4. TEST FREQUENCY

4.1 When a paint & varnish compatible production run has commenced, the first **three** slabs (one random belt from each slab) must be tested before any product from the run can be released.

4.2 If the initial three slabs pass this test, then a frequency of **every 10th slab and the last slab** in the run (one belt from each slab) shall be tested.

4.4 If any test specimen fails the test, then the test frequency shall be increased until the source of contaminant(s) can be identified and eliminated. At this stage, the Product Engineering Technologist shall be consulted.

5. TEST SURFACES & SAFETY CONSIDERATIONS

5.1 The test surface shall be an A4 sheet of Transparency film.


5.2 The test transport medium shall be Acetone, used in accordance with the latest revision of the Health & Safety data sheets. The tester must only use the medium in an area possessing adequate extraction and ventilation. The tester must wear protective gloves and safety spectacles and observe all aspects of the environment are suitable for safe working. *COSSH obligations will be met through regular monitoring of all working areas in order to establish the Occupational Exposure Limits (OEL's).*

5.3 The paint used in the test shall be white Acrylic based and must only be used within an area possessing adequate extraction and ventilation. The tester must wear protective gloves & safety spectacles and observe that all aspects of the environment are suitable for safe working.

6. BELT TEST PROCEDURE (ACETONE TEST)

6.1 The test surface will be identified with date, sequential test sheet number and the initials of whoever is carrying out the test, and then will be divided into two areas for testing the tooth side and rubber (back) side of the belt.

6.1.1 On **NO ACCOUNT** should the test surface be put through a photocopier as this imparts impurities onto the surface of the belt. *i.e. the film to be used for testing should be unused in any way.*

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6.1.2 On NO ACCOUNT should any silicone be sprayed in the near vicinity of the test area.

6.2 Approx. 2ml of Acetone should be dropped onto surface of belt and the residue allowed to drip onto the test surface. The belt surface is then placed on the test surface in the residue and the two surfaces are allowed to be rubbed or washed for a period of approximately 10 seconds.

6.3 This procedure is repeated for both tooth and rubber (back) side of the belt.

6.4 The test surface is then left to dry until the Acetone has evaporated (approximately 30 mins), then sprayed with paint, holding the spray can at a distance of approx. 20cm from the test surface. The test surface should then be sprayed evenly with 3-4 passes of paint. (Do not allow paint to accumulate in one area).

6.5 Tested samples should be compared to the relevant visual standards.

6.6 If the test subject contains materials that affect the paint finish, this shows itself in the appearance of so called “fish-eyes” on the test surface – areas where the paint will not adhere. These are crater shaped depressions, which are clearly noticeable. If these fish-eyes appear then this should be regarded as a failure.

6.6.1 Failed product must be segregated and dealt with according to procedure 4.13 – Control of Non-conformance.

6.7 Other observed imperfections in the painted test surface may include black “spots” which have come from grinding dust on the back of the belt but this is not regarded as a failure.

6.8 The release of product should be signified by the use of PASSED QUALITY CONTROL LABELS stamped with the relevant release status.

7. SOURCES

7.1 This specification was based on a VW / Audi specification (Ref number P-VW 3.10.7, Central STD 57 65 0).