(RESTRICTED)

Specification No.OFV/INS/SPECN/B&P CHEM/01 Dtd. 07/08/2015

SPECIFICATION

FOR

CHEMICALS USED IN

DEGREASING, BRIGHTENING & PASSIVATION

DURING

MANUFACTURE OF CARTRIDGE CASE (BRASS 70:30)

ORDNANCE FACTORY
VARANGAON

(RESTRICTED)

Specification No.-OFV/INS/SPECN/B&P CHEM/01 Dtd. 07/08/2015

SPECIFICATION FOR CHEMICALS USED IN DEGREASING, BRIGHTENING & PASSIVATION DURING MANUFACTURE OF CARTRIDGE CASE (BRASS 70:30)

1. SCOPE OF WORK:-

The scope involves the supply of three types of chemicals used in Degreasing, Brightening and Passivation of oily and dirty inter stage components of Cartridge Case (of material Brass 70:30 to Specification JSS-9532-2-1982).

1.1 The chemicals are

a) Degreasing Chemical
b) Brightening Chemical
c) Passivation Chemical

2. APPLICATION:-

These chemicals are used to degrease, bright and passivate the dirty, oily, and blackish inter stage components of Cartridge Case of material Brass 70:30 (to Specification JSS-9532-2-1982) in the Auto Cycle Machine.

3. BRIEF OF OPERATION OF AUTO CYCLE MACHINE:-

a) Loading of components approx. 100 kg in the vibrator.
b) Auto cycle pumping of water and degreasing solution for about 7 minutes.
c) Auto cycle plain water rinsing for about 6 minutes.
d) Auto cycle pumping of water and brightening solution for about 7 minutes.
e) Auto cycle plain water rinsing for about 6 minutes.
f) Auto cycle pumping of water and passivating solution for about 7 minutes.
g) Loading of components from vibrator to drier.
h) Drying of components at 100 to 110°C

4. GENERAL REQUIREMENT FOR THESE SOLUTIONS:-

4.1 Degreasing Chemical:

1.	Appearance	-	Transparent Liquid .
2.	Sp.Gr. at 25°C	-	1
3.	pH value	-	8.0 to 9.0
4.	Water compatiblity	-	Should be water compatible.
5.	Stickiness	-	Non sticky & free flowing through narrow tubes of dia 4 mm.

4.2 Brightening Chemical:

1.	Appearance	-	Transparent Liquid .
2.	Sp.Gr. at 25°C	-	1.3 to 1.4
3.	pH value	-	1.0 to 2.0
4.	Water compatiblity	-	Should be water compatible.
5.	Stickiness	-	Non sticky & free flowing through narrow tubes of dia 4 mm.

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4.3 Passivation Chemical:

1.	Appearance	-	Light brownish/ Dark yellow clear liquid.
2.	Sp.Gr. at 25°C	-	0.94 to 1.00
3.	pH value	-	7 to 9
4.	Solid Content	-	10% minimum.
5.	Water compatiblity	-	Should be water compatible.
6.	Stickiness	-	Non sticky & free flowing through narrow tubes of dia 4 mm.

5. TECHNICAL QUALITY ASSURANCE:-

5.1 The Passivation layer required to stand and retain itself in the following conditions on the inter stage components.

a) Inter stage component after Degreasing, Brightening and Passivation will further processed for Mouth/ Tip annealing on Induction Annealing Furnace to temperature at 450 to 550 °C.
b) Manual handling.
c) Open atmospheric condition of temperature 5 to 50 °C with max. and relative humidity 40 to 80%.

5.2 The components after brightening and passivation should be neutral (pH value of distilled water extract should be **6.5 to 7** after washing about passivated components in distilled water for about 2 minutes)

5.3 The supplier will indicate the main ingredient of each chemical and also will provide laboratory test methods for testing.

5.4 The chemicals supplied by firm should not be reacting in any way to affect the original chemical composition of component.

6. SAFETY ASPECTS:

6.1 The supplier will provide the method of safe handling of the chemicals.

6.2 The chemicals should be safe in use and should not be inflammable and hazardous.

6.3 All chemicals should not react with any part of machine.

6.4 The chemicals should be non-toxic and biodegradable or pollutant feasible.

6.5 The chemicals should not cause harmful effects on human skin/ eyes/inhalation allergies or irritations. Precautionary measures if any should be clearly indicated by supplier on the containers written with proper safety hazard classification and symbol.

7. OTHER IMPORTANT POINTS:-

7.1 The supplier will provide a certificate regarding fulfilling all the points mentioned in the specification. The report to be submitted with each consignment.

7.2 The supplier should provide (i) Technical Data Sheets and (ii) Material Safety Data Sheet of the chemicals.

7.3 The supplier shall furnish the test certificate from NABL/ NPl Labs confirming conformance to specification for the raw material to be used for manufacture of items to be supplied to OFV. The supplier is solely responsible to replace the whole consignment free of cost in case any non conformance from the specification noticed at any stage. The supplier will submit the certificate to OFV before the commencement of the bulk production.

7.4 OFV shall have right to verify the same, if required by drawing sample again getting it checked by NABL/ sister Ordnance Factories Lab.

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8. PACKING & DELIVERY:-

8.1 The supplier will supply the material in non-metallic/ plastic containers having capacity of 20 to 25 liters in the colour coding as below. Containers should be transparent or having the transparent level indicator.

a) Degreasing Solution:- Blue container
b) Brightening Solution:- Green container.
c) Passivating Solution:- Yellow container.

} Containers should be transparent or having the transparent level indicator for visibility of chemical level contained in it.

8.2 The material of container should such that it should not react with the contained solution on storage.

8.3 Delivery of chemical should be in batch-wise. Each container should be printed or labeled with following information.

a) Name of the firm.
b) Name of chemical.
c) Manufacturing date and batch No.
d) Expiry date.
e) Quantity in litre.
f) OFV S.O. No. and Date.

8.4 Each consignment of supply of chemical will be accompanied with documents of its batch No., manufacturing date and expiry date.

8.5 The shelf life of all chemical should be more than 02 years. Firm should submit Batch-wise Certificate of shelf life along with each consignment.

8.6 Any precautionary measures taken during transportation for safety should also be printed on the container.

(R.S.BOID)
GO/INSAS CASE

(LALIT JAIPAL)
DO/ INSAS CASE

(P.S.CHAUDHARI)
HOS/INSAS CASE