DC NO 3754-ME
12.12.2002

IND/ME/458
(BASED ON CS-1649A)

THIS SPECIFICATION OR ANY PATTERNS, DRAWINGS OR OTHER INFORMATION ISSUED IN CONNECTION THEREWITH MAY ONLY BE USED FOR A SPECIFIC ORDER PLACED BY COMPETENT AUTHORITY ; IT IS NOT TO BE USED FOR ANY OTHER PURPOSE WHATSOEVER WITHOUT THE EXPRESS WRITTEN SANCTION OF THE DIRECTOR GENERAL OF ~~INSPECTION~~ QUALITY ASSURANCE

07.01.20

CAMPHOR

For use in the manufacture of Propellant Explosive and Celluloid

SPECIFICATION TO GOVERN SUPPLY AND INSPECTION.

D.T.D.No.8526/43/TD-6. Approved :- 3-4-1947.

1. **TENDER SAMPLE**. The Contractor shall submit a tender sample of 250g {not less} free of charge, conforming to this specification, when called for in the tender .

Acceptance of the tender will denote that the tender sample is accepted as a standard of supply in accordance with the terms of this specification .

2. **GENERAL.** The camphor must comply in every respect with the terms of this specification.

3. **DESCRIPTION .** The camphor must be either a natural camphor or synthetic product of similar chemical constitution . The camphor must be of good quality and in the form of flowers or colour less crystals free from grit , visible impurities and foreign matter.

4. **EXAMINATION.** Samples taken from any portion of the supply must comply with the following requirements :-

(a) **General** . The material shall comply with the requirements of para 3 above.

(b) **Non-volatile residue**. The residue on volatilisation of the material in a boiling water oven shall not exceed 0.05 per cent.

(c) **Acidity**. The material shall be free from mineral acidity and the organic acidity, calculated as sulphuric acid (H_2SO_4) shall not exceed 0.005 per cent when determined as described in Appendix A.

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(d) **Chlorides and Sulphates**. The material shall be free from chlorides and sulphates.

(e) Melting Point. The melting point of the material shall be in between 174°C and 177°C. Melting point is determined by using thermometer conforming to the following essential specification with range 150 to 200 degrees celcius , sub division 0.5 degree celcius graduation.

5. **PACKING AND MARKING OF PACKAGES**. The Camphor must be supplied in sound, clean and dry approved packages, containing an approved quantity. The packages constituting a consignment must each be legibly marked with description of the contents, the contract number, a distinctive lot number, a consecutive package number, the tare and net mass , date of supply, and the contractor's initials or recognised trade mark. The inclusion of any foreign matter or impurities in any of the packages will render the whole consignment liable to rejection.

6. **INSPECTION.** The Camphor and the packages in which it is contained will be subjected to inspection by, and final approval of, the Inspecting Officer.

Samples of the material and of the packages may be taken from any portion of a consignment.

If, on examination, any sample be found not to conform to this specification, the whole consignment may be rejected.

The foregoing provisions shall apply equally to prime contractors and to any sub-contractors.

Sd/- A.A.J. BAIN
C. I. M. E.
for Director of technical development

APPENDIX 'A'

ACIDITY

Total Acidity. Dissolve 20g of the sample in 50ml alcohol and titrate the solution with N/10 baryta solution using phenolphthalein as an indicator . Carryout a blank test and apply the necessary correction.

Mineral acidity. Dissolve 20g of the sample in 100ml ether, transfer the solution to a separeting funnel and wash with two 50ml portions of distilled water . Titrate the aqueous extract with N/10 sodium hydroxide using methyl orange as an indicator. Carryout a blank test and apply the necessary correction.

Organic acidity. This is the difference between the total and mineral acidities

[illegible]

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THIS SPECIFICATION or any Drawings, Diagrams or other information [illegible] ... placed by COMPETENT AUTHORITY ... NOT TO BE USED for any other purpose whatsoever WITHOUT THE EXPRESS WRITTEN SANCTION OF THE [illegible]

CAMPHOR

(For use in the manufacture of Propellant Explosives and Celluloid)

SPECIFICATION TO GOVERN SUPPLY AND INSPECTION

D.S.I.D. No. 3526/43/PD-6. Approved [illegible]-4-1947.

1. TENDER SAMPLE. The Contractor shall submit a tender sample of 250 g. (not less than [illegible]) free of charge, conforming to this specification, when called for in the tender.

Acceptance of the tender will denote that the tender sample is accepted as a standard of supply in accordance with the terms of this specification.

2. GENERAL. The Camphor must comply in every respect with the terms of this specification.

3. DESCRIPTION. The Camphor must be either a natural camphor or a synthetic product of similar chemical constitution. The Camphor must be of good quality and in the form of flowers or colourless crystals free from grit, visible impurities and foreign matter.

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(a) General. The material shall comply with the requirements of para 3 above.

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(c) Acidity. The material shall be free from mineral acidity and the organic acidity, calculated as sulphuric acid (H_2SO_4) shall not exceed 0.005 per cent when determined as described in Appendix A.

(d) Chlorides and Sulphates. The material shall be free from chlorides and sulphates.

(e) Melting Point. The melting point of the material shall be between 174°C and 177°C.

* [illegible] melting point determined by using [illegible] thermometer conforming to [illegible] [illegible] specification [illegible] range 150 to 200 [illegible] [illegible]

contd.

8. [illegible] PACKING AND MARKING OF PACKAGES. The camphor must be supplied in sound, clean and dry approved packages containing an approved quantity. The packages constituting a consignment must each be legibly marked with description of the contents, the contract number, the distinctive lot number, a consecutive package number, the tare and nett weights, the date of supply and the contractor's initials or recognised trade mark. The inclusion of any foreign matter or impurities in any of the packages will render the whole consignment liable to rejection.

9. INSPECTION. The camphor and the packages in which it is contained will be subject to inspection by, and final approval of, the Inspecting Officer.

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[illegible] the foregoing provisions shall apply equally to prime contractors and to any sub-contractors.

Sd/- A.A.J.BAIN

O. I. M. E.

for DIRECTOR OF TECHNICAL DEVELOPMENT.

APPENDIX A.

Acidity.

Total Acidity. Dissolve 20 grams of the sample in 50 ml. alcohol and titrate the solution with N/10 baryta solution using phenolphthalein as the indicator. Carry out a blank test and apply the necessary correction.

Mineral Acidity. Dissolve 20 grams of the sample in 100 ml. ether transfer the solution to a separating funnel and wash with two 50 ml. portions of distilled water. Titrate the aqueous extract with N/10 sodium hydroxide using methyl orange as the indicator. Carry out a blank test and apply the necessary correction.

Organic Acidity. This is the difference between the total and mineral acidities.

MDD/17/8/62