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SN

INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3525-2013

Determination of styrene in adhesives used in buiding for import and export. Gas chromatography-mass spectrometry

进出口建筑用粘接剂中苯乙烯的测定 气相色谱-质谱法

(English Translation)

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard is proposed and managed by the National Certification and Accreditation Administration Committee.

This standard was drafted. People's Republic of China Guangdong CIQ.

1 Scope

This standard specifies the import and export construction adhesive styrene gas chromatography - mass spectrometry method.

This standard applies adhesive styrene content measurement in construction and export. Determination of the lower limit of 25mg/kg.

Principle 2

Using ethyl acetate or N, N- dimethylformamide was dissolved samples by gas chromatography - mass spectrometry performed. According to their retention time and Spectrum qualitative and quantitative internal standard.

3 Reagents

Unless otherwise indicated, the reagents used were of analytical grade.

3.1
ethyl acetate. purity >=99.5%.

3.2
N, N- dimethylformamide (DMF). purity >=99.5%.

3.3
Styrene (CAS Registry Number. 100-42-5). standard purity >=99.5%.

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3.4
n-undecane (internal standard, CAS Registry Number. 1120-21-4). purity >=99%.

3.5
standard stock solution a. Accurately weigh styrene (3.3) 0.125g (accurate to 0.1mg), set 25mL volumetric flask, ethyl acetate (3.1) diluted to the mark, shake well. The concentration of 5g/L, may be at 0 °C ~ 4 °C sealed a month.

3.6
standard stock solution b. Accurately weigh styrene (3.3) 0.125g (accurate to 0.1mg), set 25mL volumetric flask with DMF (3.2) diluted to the mark, shake well. The concentration of 5g/L, may be at 0 °C ~ 4 °C sealed a month.

3.7
internal standard stock solution a. Weigh accurately undecane (3.4) 0.25g (precise to 0.1mg), set 50mL volumetric flask, with ethyl Ester (3.1) diluted to the mark, shake well. The concentration of 5g/L, may be at 0 °C ~ 4 °C sealed a month.

3.8
internal standard stock solution b. Weigh accurately undecane (3.4) 0.25g (precise to 0.1mg), a 50mL volumetric flask with DMF (3.2) diluted to the mark, shake well. The concentration of 5g/L, may be at 0 °C ~ 4 °C sealed a month.

3.9
standard solution a. accurate Pipette stock standard solution a (3.5) and internal standard stock solution a (3.7) each 1.00mL, placed 25mL capacity Bottle and diluted with ethyl acetate (3.1) to the mark, shake well. The solution of styrene and internal standard concentration was 200mg/L, available at at 0 °C ~ 4 °C sealed and stored for 1 week.

3.10
standard solution b. accurate Pipette stock standard solution b (3.6) and internal standard stock solution b (3.8) each 1.00mL, placed 25mL capacity Volumetric flask, and diluted with DMF (3.2) to the mark, shake well. The solution of styrene and internal standard concentration was 200mg/L, available at at 0 °C ~ 4 °C sealed and stored for 1 week.

4 Instruments and equipment

4.1
Gas chromatography - mass spectrometry (GC-MS). with electron impact ionization (EI).

4.2
Balance. a sense of the amount of 0.1mg.

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4.3

ultrasonic generator. rated power not less than 200W.

4.4

flask. 25mL, 50mL.

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