

## ANALYTICAL REPORT No: 0760-LQ-14

| ClientSIBUR International OS-Peterburg no.7652-0488-14/5Date of report01.08.2014ObjectZAO "Sibur-KhimpronLocations. Perm |   |                     |                         |                |                                |  |  |
|--|---|---------------------|-------------------------|----------------|--------------------------------|--|--|
| Product :  | Fraction of benzene and the toluene (Bentol) <sup>1</sup> <b>Received:</b> 23.07.2014 |                     |                         |                |                                |  |  |
| Sample Drawn : Sample  | is selected and   | provided customer   | representative.         |                |                                |  |  |
| Sample Description :   | Clear, colorl   | ess liquid          |                         |                |                                |  |  |
| Festing Performed By: Intertek S-Petersburg Laboratory Date: 23+31.07.2014   |   |                     |                         |                |                                |  |  |
| Tests  | Units   | Method <sup>2</sup> | Specification<br>limits | Result         | Result Within<br>Specification |  |  |
| Density at 15 º C  | kg/m <sup>3</sup>   | ASTM D 4052         | unknown                 | 873.2          | _                              |  |  |
| Appearance   |   | Visual              | unknown                 | Clear & Bright | _                              |  |  |
| Sulphur content  | % mass  | ASTM D 4294         | unknown                 | less 0.0150    | _                              |  |  |
| Sulphur content  | mg/kg   | ASTM D 5453         | unknown                 | less 1.0       | _                              |  |  |
| Vapour Pressure RVP  | kPa   | ASTM D 323          | unknown                 | 11.5           | _                              |  |  |
| Water content (Karl Fischer Method)  | mg/kg<br>(%mass)  | ASTM D 6304         | unknown                 | 133<br>(0.01)  | -                              |  |  |
| Existent gum content (solvent washed)  | mg/100 ml   | ISO 6246            | unknown                 | 1.8            | _                              |  |  |
| Benzene content  | %(V/V)  | ASTM D 6730<br>mod. | unknown                 | 24.63          | -                              |  |  |
| Hydrocarbon type content:  |   | ASTM D 6730         |                         |                |                                |  |  |
| Aromatics  | %(V/V)  | mod.                | unknown                 | 99.25          | -                              |  |  |
| Olefins  | %(V/V)  |                     | unknown                 | Nil            | _                              |  |  |
| Oxygenates content   | %(V/V)  | ASTM D 6730<br>mod. | unknown                 | Nil            | -                              |  |  |
| Research Octane number (RON )  |   | calculated          | unknown                 | 115.8          | _                              |  |  |
| Motor Octane number (MON)  |   | calculated          | unknown                 | 105.0          | _                              |  |  |
| Oxidation stability  | min   | ASTM D 525          | unknown                 | more 1500      | _                              |  |  |
| Copper strip corrosion (3 h at 50 °C)  | rating  | ASTM D 130          | unknown                 | 1A             | -                              |  |  |
| Distillation (760 mm Hg)   |   | ASTM D 86           | unknown                 |                |                                |  |  |
| Initial bolling point (IBP)  | ٥C  |                     | unknown                 | 91.0           | _                              |  |  |
| 5% vol recovered   | ٥C  |                     | unknown                 | 97.0           | _                              |  |  |
| 10% vol recovered  | ٥C  |                     | unknown                 | 106.0          | -                              |  |  |
| 20% vol recovered  | ٥C  |                     | unknown                 | 100.0          | -                              |  |  |
| 30% vol recovered  | ٥C  |                     | unknown                 | 101.0          | -                              |  |  |
| 40% vol recovered  | ٥C  |                     | unknown                 | 102.0          | -                              |  |  |
| 50% vol recovered  | ٥C  |                     | unknown                 | 104.0          | -                              |  |  |
| 60% vol recovered  | ٥C  |                     | unknown                 | 105.5          | -                              |  |  |
| 70% vol recovered  | ٥C  |                     | unknown                 | 108.0          | -                              |  |  |
| 80% vol recovered  | ٥C  |                     | unknown                 | 109.5          | -                              |  |  |
| 90% vol recovered  | ٥C  |                     | unknown                 | 111.5          | -                              |  |  |
| 95% vol recovered  | ٥C  |                     | unknown                 | 114.5          | -                              |  |  |
| Final Boiling Point (FBP)  | ٥C  |                     | unknown                 | 131.0          | -                              |  |  |
| Losses   | % vol   |                     | unknown                 | 1.0            | -                              |  |  |
| Residue  | % vol   |                     | unknown                 | 1.0            | -                              |  |  |
| Colour ASTM  |   | ASTM D 1500         | unknown                 | less 0.5       | _                              |  |  |
| Total Contamination  | mg/kg   | EN 12662            | unknown                 | less 6.0 (1)   | _                              |  |  |

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| Tests        | Units | Method <sup>2</sup> | Specification<br>limits | Result    | Result Within<br>Specification |
|--------------|-------|---------------------|-------------------------|-----------|--------------------------------|
| Lead content | mg/kg | ASTM D 3605<br>mod  | unknown                 | less 0.25 | -                              |
| Smell        |       | Organoleptic        | unknown                 | aromatics | -                              |

Note 1. This product is not included in the Scope of accreditation laboratory.

Note2. All these methods are intended to record for analysis of Petroleum Products. Sample testing is proposed for petrochemicals. Thus, the results can not be interpreted as the results obtained in the framework of the above methods. Terms perform some tests had to pick from the properties of the product.

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