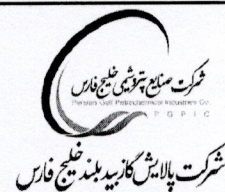


شماره مدرک: PGBGT-PE-SM-001

شماره صفحه: ۲ از ۶

دفترچه

راهنمای مشخصات خوراک و محصول

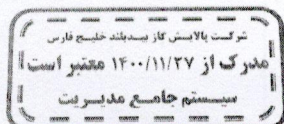


جدول ۲: ترکیبات محصول گازی اتان

| Composition                  | Units   | Method                | Spec                            |
|------------------------------|---------|-----------------------|---------------------------------|
| Ethane                       | W/W%    | ASTM D-1945           | 98 (Min)                        |
| Methane                      | W/W%    | ASTM D-1945           | 2 (Max)                         |
| Propane Plus                 | W/W%    | ASTM D-1945           | 1 (Max)                         |
| CO <sub>2</sub>              | PPM wt. | ASTM D-2505           | 50 (Max)                        |
| Total organic Sulphur (as S) | PPM wt. | GC-SCD                | 10 (Max)                        |
| Nitrogen                     | PPM wt. | ASTM D-2504-88        | 0.2 (Max)                       |
| Temperature                  | °C      | -                     | Min 20/Max 54                   |
| Pressure                     | Barg    | -                     | 32.2 Based on pipeline pressure |
| State                        | -       | -                     | Gas                             |
| Arsenic                      | PPB wt. | ASTM E-1479-99-ICP-MS | 5 (Max)                         |
| Mercury                      | PPB wt. | ASTM E-1479-99-ICP-MS | 2 (Max)                         |
| Amine                        | PPM v.  | GC Solvent Column FID | 5 (Max)                         |
| H <sub>2</sub> S             | PPM v.  | ASTM D4810            | 5 (Max)                         |
| COS                          | PPB wt. | ASTM D4810            | 3 (Max)                         |

جدول ۳: ترکیبات محصول پروپان مایع

| Composition                   | Units   | Method         | Spec                      |
|-------------------------------|---------|----------------|---------------------------|
| Propane                       | Mole%   | ASTM D-2163-66 | 98 (Min)                  |
| Ethane                        | Mole%   | ASTM D-2163-66 | 0.4 (Max)                 |
| Butane                        | Mole%   | ASTM D-2163-66 | 1.4 (Max)                 |
| Pentane Plus                  | Mole%   | ASTM D-2163-66 | 0.01 (Max)                |
| H <sub>2</sub> S              | PPM v.  | UOP 212        | 5(Max)                    |
| Vapor Pressure @ 37.8°C       | Barg    | ASTM D-1267-67 | 0.9887                    |
| Temperature @ 95% Evaporation | °C      | ASTM D-1837-64 | -38.3                     |
| Copper Corrosion              | -       | ASTM D-1838-64 | Max. No. 1                |
| Total organic Sulphur         | PPM wt. | ASTM D-3246    | 30                        |
| Water Content                 | -       | -              | Pass NGPA Propane Dryness |



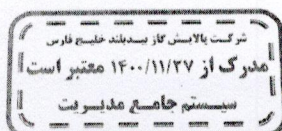
|                                                   |                                                      |  |
|---------------------------------------------------|------------------------------------------------------|--|
| شماره مدرک: PGBGT-PE-SM-001<br>شماره صفحه: ۳ از ۶ | <b>دفترچه</b><br><b>راهنمای مشخصات خوراک و محصول</b> |  |
|---------------------------------------------------|------------------------------------------------------|--|

جدول ۴: ترکیبات محصول بوتان مایع

| Composition                   | Units   | Method         | Spec       |
|-------------------------------|---------|----------------|------------|
| Butane                        | Mole%   | ASTM D-2163-66 | 97.5 (Min) |
| Ethane                        | Mole%   | ASTM D-2163-66 | 0.08 (Max) |
| Propane                       | Mole%   | ASTM D-2163-66 | 2 (Max)    |
| Pentane Plus                  | Mole%   | ASTM D-2163-66 | 0.82 (Max) |
| H <sub>2</sub> S              | PPM v.  | UOP 212        | Nil        |
| Vapor Pressure @ 37.8°C       | Barg    | ASTM D-1267-67 | 4.8        |
| Temperature @ 95% Evaporation | °C      | ASTM D-1837-64 | 2.22       |
| Copper Corrosion              | -       | ASTM D-1838-64 | Max. No. 1 |
| Total organic Sulphur         | PPM wt. | ASTM D-3246    | 30         |
| Water Content                 | PPM v.  | -              | 10 (Max)   |

جدول ۵: ترکیبات محصول LPG مایع

| Composition     | Units | Method     | Spec                |
|-----------------|-------|------------|---------------------|
| Properties      | -     | -          | C3/C4 (LPG) Mixture |
| Temperature     | °C    | -          | 40 (Max)            |
| Pressure        | Barg  | -          | 19-35               |
| Phase           | -     | -          | Liquid              |
| CO <sub>2</sub> | Mole% | ASTM D2163 | 0.01 (max)          |
| Methane         | Mole% | ASTM D2163 | 1 (Max)             |
| Ethane          | Mole% | ASTM D2163 | 1 (Max)             |
| Propane         | Mole% | ASTM D2163 | 80 ~ 60             |
| Butane          | Mole% | ASTM D2163 | 40 ~ 20             |
| Pentane Plus    | Mole% | ASTM D2163 | 5 (Max)             |

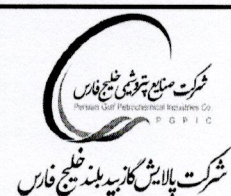


شماره مدرک: PGBGT-PE-SM-001

شماره صفحه: ۴ از ۶

دفترچه

راهنمای مشخصات خوراک و محصول



جدول ۶: ترکیبات محصول پنتان پلاس صادراتی

| Composition                   | Units              | Method          | Spec                                   |
|-------------------------------|--------------------|-----------------|----------------------------------------|
| Density @15°C                 | gr/cm <sup>3</sup> | ASTM D 4052-18a | 0.65 – 0.7                             |
| Saybolt color units           | --                 | ASTM D 156-15   | 25 (Min)                               |
| Reid Vapor Pressure           | Bara               | ASTM D323-15a   | 0.82 in Base Case<br>0.76 in Alt. Case |
| Lead Content                  | PPB                | IP224/02(2014)  | 150 (Max)                              |
| Arsenic                       | PPB wt.            | UOP 296         | <50                                    |
| Total Sulfur                  | PPM wt.            | ASTM D5453-19a  | 300 (Max)                              |
| Total paraffin                | W/W%               | GC Analysis     | 75 (Min)                               |
| Naphthene                     | W/W%               | GC Analysis     | 15 (Max)                               |
| Olefins                       | W/W%               | GC Analysis     | 0.5 (Max)                              |
| Aromatics                     | W/W%               | GC Analysis     | 6 (Max)                                |
| Initial Boiling Point         | °C                 | ASTM D86-19     | 30 (Min)                               |
| Final Boiling Point           | °C                 | ASTM D86-19     | 180 (Max)                              |
| Chloride                      | PPM wt.            | UOP 779-08      | <1                                     |
| Mercury                       | PPB wt.            | UOP 938-10      | <1                                     |
| Carbon di Sulphide            | PPM wt.            | ASTM D5623      | <1                                     |
| % Evaporation @ 60°C          | -                  | -               | Min 25% Liquid Volume                  |
| Reactable Sulphur content     | -                  | GPA-1138        | Negative                               |
| Max Reactable Sulphur content | PPM mol RSH        | -               | 30 (Max)                               |
| RON                           | -                  | ASTM D-2699     | 60(Min)                                |

شماره مدرک: PGBGT-PE-SM-001

شماره صفحه: ۵ از ۶

دفترچه

راهنمای مشخصات خوراک و محصول



جدول ۷: ترکیبات محصول پنتان پلاس فروش داخلی

| Composition                   | Units              | Method          | Spec                                   |
|-------------------------------|--------------------|-----------------|----------------------------------------|
| Density @15°C                 | gr/cm <sup>3</sup> | ASTM D 4052-18a | 0.65 – 0.7                             |
| Saybolt color units           | --                 | ASTM D 156-15   | 25 (Min)                               |
| Reid Vapor Pressure           | Bara               | ASTM D323-15a   | 0.82 in Base Case<br>0.76 in Alt. Case |
| Lead Content                  | PPB                | IP224/02(2014)  | 150 (Max)                              |
| Arsenic                       | PPB wt.            | UOP 296         | <50                                    |
| Total Sulfur                  | PPM wt.            | ASTM D5453-19a  | 500 (Max)                              |
| Total paraffin                | W/W%               | GC Analysis     | 75 (Min)                               |
| Naphthene                     | W/W%               | GC Analysis     | 15 (Max)                               |
| Olefins                       | W/W%               | GC Analysis     | 0.5 (Max)                              |
| Aromatics                     | W/W%               | GC Analysis     | 6 (Max)                                |
| Initial Boiling Point         | °C                 | ASTM D86-19     | 30 (Min)                               |
| Final Boiling Point           | °C                 | ASTM D86-19     | 180 (Max)                              |
| Chloride                      | PPM wt.            | UOP 779-08      | <1                                     |
| Mercury                       | PPB wt.            | UOP 938-10      | <1                                     |
| Carbon di Sulphide            | PPM wt.            | ASTM D5623      | <1                                     |
| % Evaporation @ 60°C          | -                  | -               | Min 25% Liquid Volume                  |
| Reactable Sulphur content     | -                  | GPA-1138        | Negative                               |
| Max Reactable Sulphur content | PPM mol RSH        | -               | 30 (Max)                               |
| RON                           | -                  | ASTM D-2699     | 60(Min)                                |

۵- مدارک مرتبط

۶- سوابق و مستندات

