# ELTAS™ HPE900/HPE905

## High Temp. FFKM Full-compound product Non-filler type

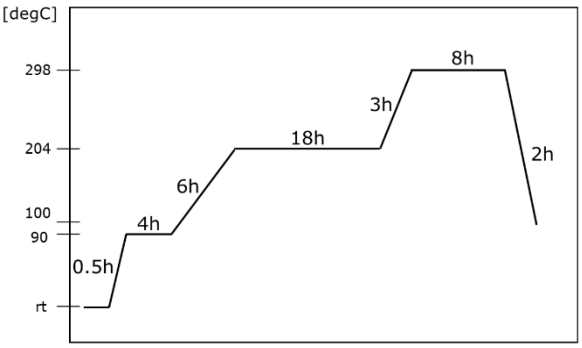
| | | HPE900 Yellow/ Golden Brown | HPE905 Yellow/ Golden Brown |
|---|---|---|---|
| Color (Compound / Post cured) | | | |
| **Initial properties [ISO 37, ISO 7619-1, ISO 34-1]** | | | |
| HPE900: Press Cure: 220°C /15min, Post Cure: Step Cure* Refer to below<br>HPE905: Press Cure: 190°C /15min, Post Cure: Step Cure* Refer to below | | | |
| Hardness, Duro A, peak | Duro A | 67 | 64 |
| Tensile strength | MPa | 15.6 | 18.8 |
| Elongation | % | 250 | 240 |
| **Compression set[1] [ASTM D1414/D395][Method B][P-24 O-ring]** | | | |
| 280°C /70 hrs | % | 23 | 16 |
| 280°C /168 hrs | % | 28 | 20 |
| 280°C /500 hrs | % | 38 | 25 |
| 280°C /1000 hrs | % | 48 | 33 |
| 290°C /70 hrs | % | 23 | 18 |
| 290°C /168 hrs | % | 30 | 25 |
| 290°C /500 hrs | % | 43 | 30 |
| 290°C /1000 hrs | % | 57 | 46 |
| 300°C /70 hrs | % | 26 | 17 |
| 300°C /168 hrs | % | 35 | 24 |
| 300°C /500 hrs | % | 58 | 45 |
| 300°C /1000 hrs | % | 80 | 62 |
| 310°C /70 hrs | % | 32 | 22 |
| 310°C /168 hrs | % | 50 | 24 |
| 310°C /500 hrs | % | 81 | 44 |
| 310°C /1000 hrs | % | >100 | 71 |

[1]At room temp. 18% compression for the data of 280°C/290°C/300°C, 17% for 310°C

*Step cure condition (Total: 41.5h)

HPE900: $N^2$ atmosphere
HPE905: Air atmosphere

1. 0.5h at rt to 90℃
2. 4h at 90℃
3. 6h at 90℃ to 204℃
4. 18h at 204℃
5. 3h at 204℃ to 298℃
6. 8h at 298℃
7. 2h at 298℃ to 100℃




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# Chemical Resistance Data

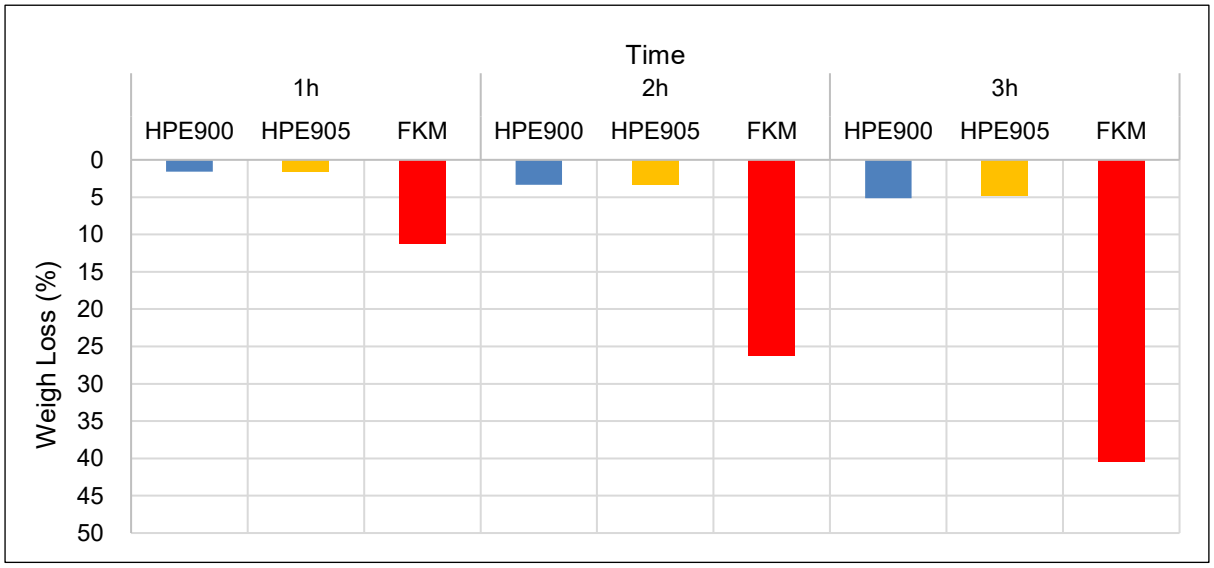
| Chemical Environment | HPE900 | HPE905 |
|---|---|---|
| 30% NaOH (50 ℃ × 14 days) | A | A |
| Sodium hypochlorite (50 ℃ × 14 d days) | A | A |
| 28% $NH_3$ aq (40 ℃ × 14 days) | C | B |
| 28% $NH_3$ aq (23 ℃ × 14 days) | C | B |
| 36% HCl (50 ℃ × 14 days) | TBA | TBA |
| 97% $H_2SO_4$ (50 ℃ × 14 days) | A | A |
| 65% $HNO_3$ (50 ℃ × 14 days) | B | A |
| Glacial acetic acid (50 ℃ × 14 days) | B | B |
| Acetic anhydride (50 ℃ × 14 days) | A | B |
| Triethylenetetramine (40 ℃ × 14 days) | A | A |
| Aniline (40 ℃ × 14 days) | A | A |
| Triethylamine (40 ℃ × 14 days) | A | A |
| Ethylenediamine (40 ℃ × 14 days) | A | A |
| Butyl Acetate (40 ℃ × 14 days) | B | B |
| Toluene (40 ℃ × 14 days) | B | B |

| | ΔV | ΔHs |
|---|---|---|
| A | < ±5 | < ±3 |
| B | < ±10 | < ±6 |
| C | < ±15 | < ±9 |
| D | < ±20 | < ±12 |
| E | ±20 < | ±12 < |

# Plasma Resistance Weight Loss Data

Test Conditions:

| Parallel plate reactive RIE | |
|---|---|
| **RF (W)** | 250 |
| **Pressure (Pa)** | 100 |
| **$CF_4/O_2$ (sccm)** | 9/90 |
| **BIAS (W)** | 0 |




This information corresponds with the state of our knowledge at the time of printing and is intended to give information of possible applications to a reader with technical experience. The assurance of properties, product responsibility or guarantee are impossible without our clarification as to the specific applications of use and service conditions.

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