

# Stanyl® TW371

(PA46+PTFE)

Heat Stabilized, Wear and Friction Modified

Print Date: 2023-09-28

Stanyl® TW371 is a friction-modified high heat polyamide that offers excellent wear & friction properties in combination with outstanding creep resistance, strength, stiffness and fatigue resistance especially at high temperatures in combination with cycle-time advantages and excellent flow.

| PROPERTIES                      | TYPICAL DATA      | UNIT | TEST METHOD       |
|---------------------------------|-------------------|------|-------------------|
| <b>RHEOLOGICAL PROPERTIES</b>   |                   |      |                   |
|                                 | <b>DRY / COND</b> |      |                   |
| Molding shrinkage [parallel]    | 2 / *             | %    | Sim. to ISO 294-4 |
| Molding shrinkage [normal]      | 2 / *             | %    | Sim. to ISO 294-4 |
| <b>MECHANICAL PROPERTIES</b>    |                   |      |                   |
|                                 | <b>DRY / COND</b> |      |                   |
| Tensile modulus                 | 3000 / 1000       | MPa  | ISO 527-1/-2      |
| Tensile modulus (120°C)         | 750 / –           | MPa  | ISO 527-1/-2      |
| Tensile modulus (160°C)         | 650               | MPa  | ISO 527-1/-2      |
| Tensile modulus (180°C)         | 600               | MPa  | ISO 527-1/-2      |
| Tensile modulus (200°C)         | 560               | MPa  | ISO 527-1/-2      |
| Yield stress                    | 90 / 50           | MPa  | ISO 527-1/-2      |
| Yield stress (120°C)            | 45                | MPa  | ISO 527-1/-2      |
| Yield stress (160°C)            | 40                | MPa  | ISO 527-1/-2      |
| Yield stress (180°C)            | 35                | MPa  | ISO 527-1/-2      |
| Yield stress (200°C)            | 30                | MPa  | ISO 527-1/-2      |
| Nominal strain at break         | 25 / >50          | %    | ISO 527-1/-2      |
| Nominal strain at break (120°C) | >50               | %    | ISO 527-1/-2      |
| Nominal strain at break (160°C) | >50               | %    | ISO 527-1/-2      |
| Nominal strain at break (180°C) | >50               | %    | ISO 527-1/-2      |
| Nominal strain at break (200°C) | >50               | %    | ISO 527-1/-2      |
| Flexural modulus                | 2850 / 900        | MPa  | ISO 178           |

All the trademarks mentioned here are trademarks of Envalior.

Seller represents and warrants exclusively that on the date of delivery by Seller the product shall be in conformity with the specifications agreed upon. Seller makes no other representations or warranties, whether express or implied.

Seller is not responsible or liable for the design of the products of the Customer and it is the responsibility of the Customer to determine that the Seller's product is safe, complies with application laws and regulations, and is technically or otherwise fit for its intended use. Seller does not endorse or claim suitability of its products for a specific application and disclaims each and every representation or warranty, whether express or implied, in that respect.

Typical values are indicative only and are not to be construed as being binding specifications. Colorants in the product or other additives may cause significant variations in typical values.

Copyright © Envalior 2023. All rights reserved. No part of the information may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of Envalior.

# Stanyl® TW371

Print Date: 2023-09-28

| PROPERTIES                             | TYPICAL DATA | UNIT  | TEST METHOD |
|----------------------------------------|--------------|-------|-------------|
| Flexural modulus (120°C)               | 700          | MPa   | ISO 178     |
| Flexural modulus (160°C)               | 650          | MPa   | ISO 178     |
| Flexural strength                      | 110 / –      | MPa   | ISO 178     |
| Flexural strength (120°C)              | 23           | MPa   | ISO 178     |
| Flexural strength (160°C)              | 21           | MPa   | ISO 178     |
| Charpy impact strength (+23°C)         | N / N        | kJ/m² | ISO 179/1eU |
| Charpy impact strength (–30°C)         | 150 / N      | kJ/m² | ISO 179/1eU |
| Charpy notched impact strength (+23°C) | 9 / 15       | kJ/m² | ISO 179/1eA |
| Charpy notched impact strength (–30°C) | 5 / 5        | kJ/m² | ISO 179/1eA |
| Izod notched impact strength (+23°C)   | 7 / 14       | kJ/m² | ISO 180/1A  |
| Izod notched impact strength (–40°C)   | 5 / 5        | kJ/m² | ISO 180/1A  |

| THERMAL PROPERTIES                           | DRY / COND |        |                        |
|----------------------------------------------|------------|--------|------------------------|
| Melting temperature (10°C/min)               | 295 / *    | °C     | ISO 11357-1/-3         |
| Temp. of deflection under load (1.80 MPa)    | 190 / *    | °C     | ISO 75-1/-2            |
| Temp. of deflection under load (0.45 MPa)    | 290 / *    | °C     | ISO 75-1/-2            |
| Coeff. of linear therm. expansion (parallel) | 0.85 / *   | E-4/°C | ISO 11359-1/-2         |
| Coeff. of linear therm. expansion (normal)   | 1.1 / *    | E-4/°C | ISO 11359-1/-2         |
| Burning Behav. at 1.5 mm nom. thickn.        | HB / *     | class  | IEC 60695-11-10        |
| Thickness tested                             | 1.5 / *    | mm     | IEC 60695-11-10        |
| UL recognition                               | Yes / *    | –      | –                      |
| Burning Behav. at 3.0 mm nom. thickn.        | HB / *     | class  | IEC 60695-11-10        |
| Thickness tested                             | 3 / *      | mm     | IEC 60695-11-10        |
| UL recognition                               | Yes / *    | –      | –                      |
| Thermal Index 5000 hrs                       | 152        | °C     | IEC 60216/ISO 527-1/-2 |

| ELECTRICAL PROPERTIES | DRY / COND |       |               |
|-----------------------|------------|-------|---------------|
| Volume resistivity    | 1E12 / 1E7 | Ohm*m | IEC 62631-3-1 |

All the trademarks mentioned here are trademarks of Envalior.

Seller represents and warrants exclusively that on the date of delivery by Seller the product shall be in conformity with the specifications agreed upon. Seller makes no other representations or warranties, whether express or implied.

Seller is not responsible or liable for the design of the products of the Customer and it is the responsibility of the Customer to determine that the Seller's product is safe, complies with application laws and regulations, and is technically or otherwise fit for its intended use. Seller does not endorse or claim suitability of its products for a specific application and disclaims each and every representation or warranty, whether express or implied, in that respect.

Typical values are indicative only and are not to be construed as being binding specifications. Colorants in the product or other additives may cause significant variations in typical values.

Copyright © Envalior 2023. All rights reserved. No part of the information may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of Envalior.

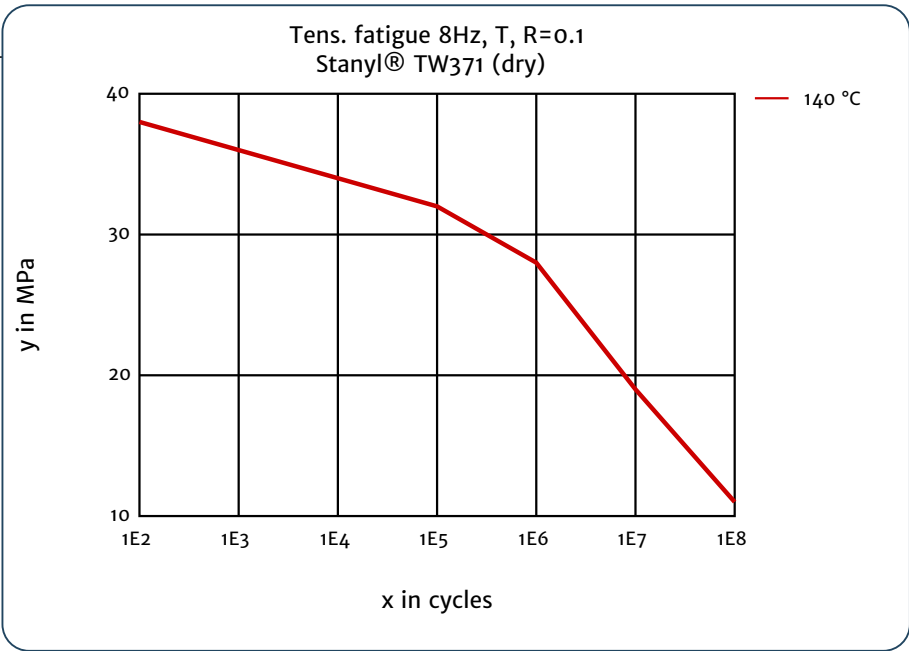
Property Data

Stanyl® TW371

Print Date: 2023-09-28

| PROPERTIES                 | TYPICAL DATA | UNIT  | TEST METHOD    |
|----------------------------|--------------|-------|----------------|
| Comparative tracking index | 400 / –      | V     | IEC 60112      |
|                            |              |       |                |
| OTHER PROPERTIES           | DRY / COND   |       |                |
| Humidity absorption        | 3.2 / *      | %     | Sim. to ISO 62 |
| Density                    | 1250 / –     | kg/m³ | ISO 1183       |

Tens. fatigue 8Hz, T, R=0.1 ,  
dry



All the trademarks mentioned here are trademarks of Envalior.  
Seller represents and warrants exclusively that on the date of delivery by Seller the product shall be in conformity with the specifications agreed upon. Seller makes no other representations or warranties, whether express or implied.  
Seller is not responsible or liable for the design of the products of the Customer and it is the responsibility of the Customer to determine that the Seller's product is safe, complies with application laws and regulations, and is technically or otherwise fit for its intended use. Seller does not endorse or claim suitability of its products for a specific application and disclaims each and every representation or warranty, whether express or implied, in that respect.  
Typical values are indicative only and are not to be construed as being binding specifications. Colorants in the product or other additives may cause significant variations in typical values.  
Copyright © Envalior 2023. All rights reserved. No part of the information may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of Envalior.