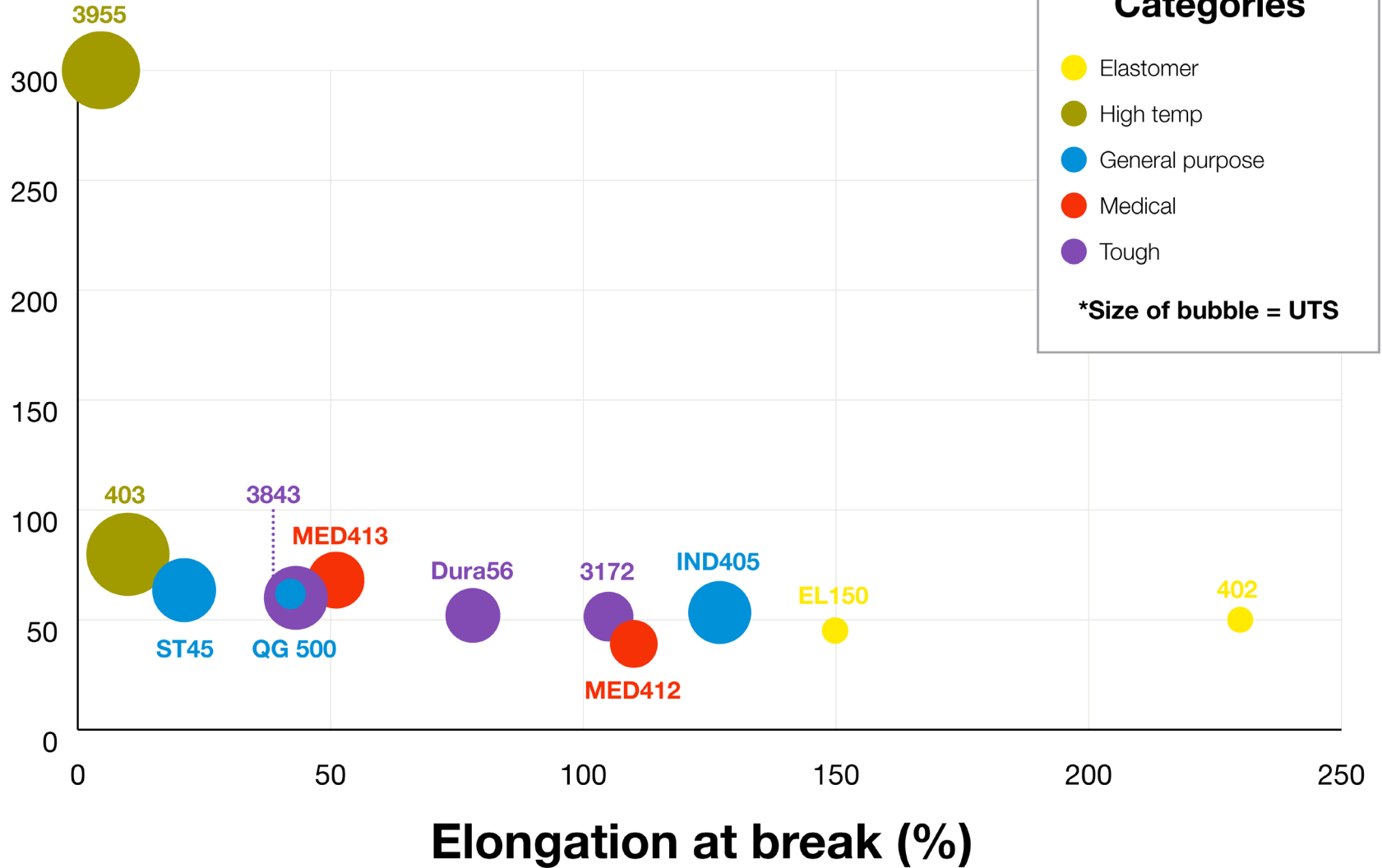


# Origin® One Featured Materials Overview



HDT @ 0.455 MPa



**Categories**

- Elastomer
- High temp
- General purpose
- Medical
- Tough

\*Size of bubble = UTS



## Origin® One Featured Materials Overview

Material name	Description	Categories	Ultimate tensile strength	Elongation at break	Tensile modulus	HDT	Notched izod impact	Hardness	Colors	Consider replacing	Partner page
3955	Very high temperature, high stiffness FST	●	67 MPa	2.10%	<b>3556 MPa</b>	<b>&gt; 300° C</b>	23 J/m	<b>84 D</b>	Black	Ultem, phenolic, PBT, aluminum	<a href="#">LOCTITE AM</a>
403	High strength, stiffness, and good HDT	●	<b>72 MPa</b>	10%	2572 MPa	80° C	27 J/m	81 D	Black	Nylon 6/6	<a href="#">LOCTITE AM</a>
3843	Versatile, good all-around engineering polymer	●	53 MPa	43%	1806 MPa	60° C	53 J/m	74 D	Black, Clear, White	ABS, delrin, polypropylene	<a href="#">LOCTITE AM</a>
Dura56	Durable, impact-resistant, exceptional surface finish, low cost per kg	●	44 MPa	78%	1595 MPa	52° C	56 J/m	72 D	Black	ABS, delrin, polypropylene	<a href="#">TDS</a>
3172	Moderately flexible, ductile, great impact strength	●	39 MPa	105%	1494 MPa	51° C	<b>73 J/m</b>	72 D	Cyan, Grey	Impact modified polypropylene, nylon 6, HDPE	<a href="#">LOCTITE AM</a>
IND405	Clear, moderately flexible, ductile, great impact strength	●	52 MPa	127%	1378 MPa	53° C	72 J/m	79 D	Clear	Impact modified polypropylene, nylon 6, HDPE	<a href="#">LOCTITE AM</a>
ST45	Versatile, good all-around engineering polymer	●	53 MPa	21%	2000 MPa	63° C	20 J/m	81 D	Black, Clear	ABS, delrin	<a href="#">BASF Forward AM</a>
QG 500	Uniquely flexible engineering material with great impact strength	●	20 MPa	42%	465 MPa	62° C (Tg)	70 J/m	76 D	Clear	LDPE	<a href="#">DSM Somos</a>
402	TPU-like elastomer with good tear strength and elongation at break	●	5.5 MPa	<b>230%</b>	42 MPa	Not applicable	Not applicable	75-90 A	Black	70-90 A TPU, flexible foam	<a href="#">LOCTITE AM</a>
EL150 (Coming soon)	Soft TPU-like elastomer	●	6 MPa	150%	25 MPa	Not applicable	Not applicable	70-80 A	Clear	70-80 A TPU, flexible foam	<a href="#">BASF Forward AM</a>
MED412	Moderately flexible, ductile, great impact strength	●	37 MPa	110%	1305 MPa	39° C	50 J/m	78 D	Clear	Medical-grade polypropylene	<a href="#">TDS</a>
MED413	Versatile engineering medical grade material	●	46 MPa	51%	1673 MPa	68° C	59 J/m	79 D	Clear, White	Medical-grade ABS	<a href="#">TDS</a>

\*Bold blue values = Highest value in it's category. Material categories: ●Elastomer ●High temp ●General purpose ●Medical ●Tough

## Origin® One Advanced Materials Comparison

Material name	Temperature resistance	Flame resistance	Chemical resistance	UV stability	Dielectric strength	Low water absorption	Strength	Stiffness	Toughness	Biocompatibility testing	Print speed	Material cost
3955	Strong	Strong	Refer to data sheet	Good	Strong	-	Strong	Strong	Low	-	Strong	\$\$\$
403	Strong	-	-	Good	Strong	-	Strong	Strong	Low	-	Good	\$\$
3843	Good	-	Refer to data sheet	Good	Strong	Good	Good	Good	Good	Cyto, irritation	Good	\$\$
Dura56	Low	-	-	Good	-	Low	Good	Good	Strong	-	Good	\$
3172	Low	-	-	Good	-	Good	Good	Good	Strong	Cyto, irritation	Good	\$\$
IND405	Low	-	-	Good	-	Good	Good	Good	Strong	Cyto, irritation	Good	\$\$
ST45	Good	Good	-	Good	Strong	-	Good	Strong	Low	Cyto, irritation, sensitization	Strong	\$
QG 500	Good	-	-	Good	-	Strong	Low	Low	Strong	-	Strong	\$\$
402	Not applicable	-	Refer to data sheet	Good	-	Low	Low	Low	Not applicable	Irritation	Low	\$\$
EL150 (Coming soon)	Not applicable	-	-	Good	-	-	Low	Low	Not applicable	Cyto	Strong	\$\$\$
MED412	Low	-	-	Good	-	Strong	Good	Good	Good	Cyto, irritation, sensitization	Good	\$\$\$
MED413	Good	-	-	Good	-	Low	Good	Good	Strong	Cyto, irritation, sensitization	Good	\$\$\$

\*- = Data unavailable

Note: This guide should be used to compare Origin certified materials with each other. Please refer to individual material data sheets for more info.

(주) 티모스 - 한국 공식 파트너  
 경기도 광명시 하안로 60 B동 1307호(소하동, 광명테크노파크)  
 +82 2 6297 5750 / www.thymos.co.kr  
 3dp@thymos.co.kr

