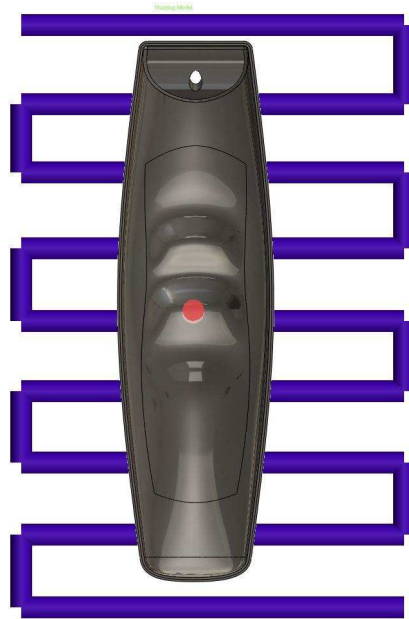


SIMPOE-MOLD Report



Type: Shell
Bemerk: 12646
Mold: 0102
Materie: ABS
Product: (P) BATERIJ / MOVOUDER LOPPE



Afstandsbediening onderzijde

Title	Mold Flow Report Voorbeeld
Date	
Institute	Design Solutions
Author	Dolf Broekaart

Contents

1. [Introduction](#)
2. Information
 - 2.1 [Model](#)
 - 2.2 [Material](#)
 - 2.3 [Process Condition](#)
3. Summary
 - 3.1 [FLOW Result](#)
 - 3.2 [PACK Result](#)
 - 3.3 [COOL Result](#)
 - 3.4 [WARP Result](#)
4. [Special Note](#)
5. Figures
 - 5.1 [Material Parameter \(X-Y Plot\)](#)
 - 5.2 [Result \(X-Y Plot\)](#)
 - 5.3 [FLOW \(3D Model view\)](#)
 - 5.4 [PACK \(3D Model view\)](#)
 - 5.5 [COOL \(3D Model view\)](#)
 - 5.6 [WARP \(3D Model view\)](#)

1. Introduction

Dit is een voorbeeld document om de output van SimpoeWorks te tonen

2.1 Model Information

Name: onderkant

Type: Shell

Volume: 4.529 (cm³)

Weight: 4.266 (g)

Size:
X: 35.833 (mm)
Y: 123.746 (mm)
Z: 10.512 (mm)

2.2 Material Information

Group No = 1

Material No = 78

Material Name = ABS

Product Name = (P) BAYER / NOVODUR L3FR

Melt Temperature = 240

Mold Temperature = 52

Eject Temperature = 105

Glass Transition Temperature = 1 105

Specific Heat = 1 16100000

Conductivity = 1 14500

Viscosity = 7 1330000000000 373.1 0 26.15 51.6 576900 0.2856

 Density = 13 0.9772 0.000604 1720000000 0.003564 0.9772 0.000169 2530000000 0.002814 373.1
 2.48E-08 0 0 0

Shear Modulus = -1

-1

Thermal Linear Expansional Coefficient= 2 1E-4 1E-4

Young Modulus = 2 26000000000 26000000000

Poisson Ratio = 2 0.35 0.35

Curing Kinetics = -1

No-Flow Temperature = -1

Melt Flow Rate Index = 1 46

Fibers = -1

2.3 Process Condition Information

FLOW/PACK

Filling Time = 0.15 sec

Primarily Material Melt Temperature = 240 oC

Mold Wall Temperature = 52 oC

Max. Inject(Machine) Pressure = 165 MPa

Max. Inject(Machine) Flow Rate = 150 cc/sec

*Flow/Pack Switch Point in Filled Volume = 100 %

Post-filling(1: Exist, 0: Not) = 0

Pressure Holding Time = 0.96 sec

Total Time in Pack Stage = 20 sec

Residual Stress Calculation(1: Exist, 0: Not) = 1

Fiber Orientation Calculation(1: Exist, 0: Not) = 0

Co-Injection(1: Exist, 0: Not) = 0

Secondary Material Melt Temperature = 230 oC

Multi general Gate Flow-rate/Press control(0: Equivalent, 1: Auto) = 1

Gravity Direction(+/(X,Y,Z): +/(1,2,3)) = 3

COOL

Inlet melt temperature = 240 oC

Min. Coolant temperature = 25 oC

Air temperature = 30 oC

Mold open time = 5 sec

Average coolant flow rate = 150 cc/sec

Control type(1:Eject temp., 2:Cooling time) = 1

Eject temperature(If control type is "1") = 120 oC

Cooling time(If control type is "2") = 0.81 sec

WARP

Environment Temperature = 20 oC

Gravity Direction(+/(X,Y,Z): +/(1,2,3)) = 3

3.1 Summary - Flow Result

X-dir. Clamping Force= 6.34 Ton (14.25 Klbf)

Y-dir. Clamping Force= 2.46 Ton (5.52 Klbf)

Z-dir. Clamping Force= 13.99 Ton (31.45 Klbf)

Requiring injection pressure= 46.29 Mpa (6715.64 psi)

Max. central temperature= 242.76 oC (468.98 oF)

Max. average temperature= 232.44 oC (450.40 oF)
 Max. bulk temperature= 253.85 oC (488.92 oF)
 Max. shear stress= 0.77 Mpa (111.22 psi)
 Max. shear rate= 46549.88 1/sec
 Averaged perfect cooling time= 1.13 sec
 CPU Time = 213.45 sec

3.2 Summary - PACK Result

Max. central temperature= 45.46 oC (113.83 oF)
 Max. average temperature= 45.44 oC (113.79 oF)
 Max. bulk temperature= 45.45 oC (113.81 oF)
 Max. shear stress= 0.27 Mpa (39.38 psi)
 Max. shear rate= 7.906558e+001 1/sec
 Max. residual stress= 13.57 Mpa (1968.65 psi)

3.3 Summary - COOL Result

Averaged part cooling time= 0.77 sec
 Averaged part temperature= 116.32 oC(241.38 oF)
 Averaged mold cavity temperature= 43.28 oC(109.90 oF)
 Averaged mold cavity heat flux= -2.33 J/cm²-sec (-1.58e+001 Kbtu/in²-sec)
 Averaged cool channel heat flux= 1.18 J/cm²-sec (8.04e+000 Kbtu/in²-sec)
 Part temperature range= 95.11 ~ 149.19 oC(203.19 ~ 300.54 oF)
 Mold cavity temperature range= 39.44 ~ 45.48 oC(102.99 ~ 113.87 oF)
 Mold cavity heat flux range= -3.06 ~ -1.99 J/cm²-sec(-20.81 ~ -13.57 Kbtu/in²-sec)
 Cool channel heat flux range= 0.45 ~ 2.93 J/cm²-sec(3.04 ~ 19.96 Kbtu/in²-sec)
 CPU Time = 655.85 sec

3.4 Summary - WARP Result

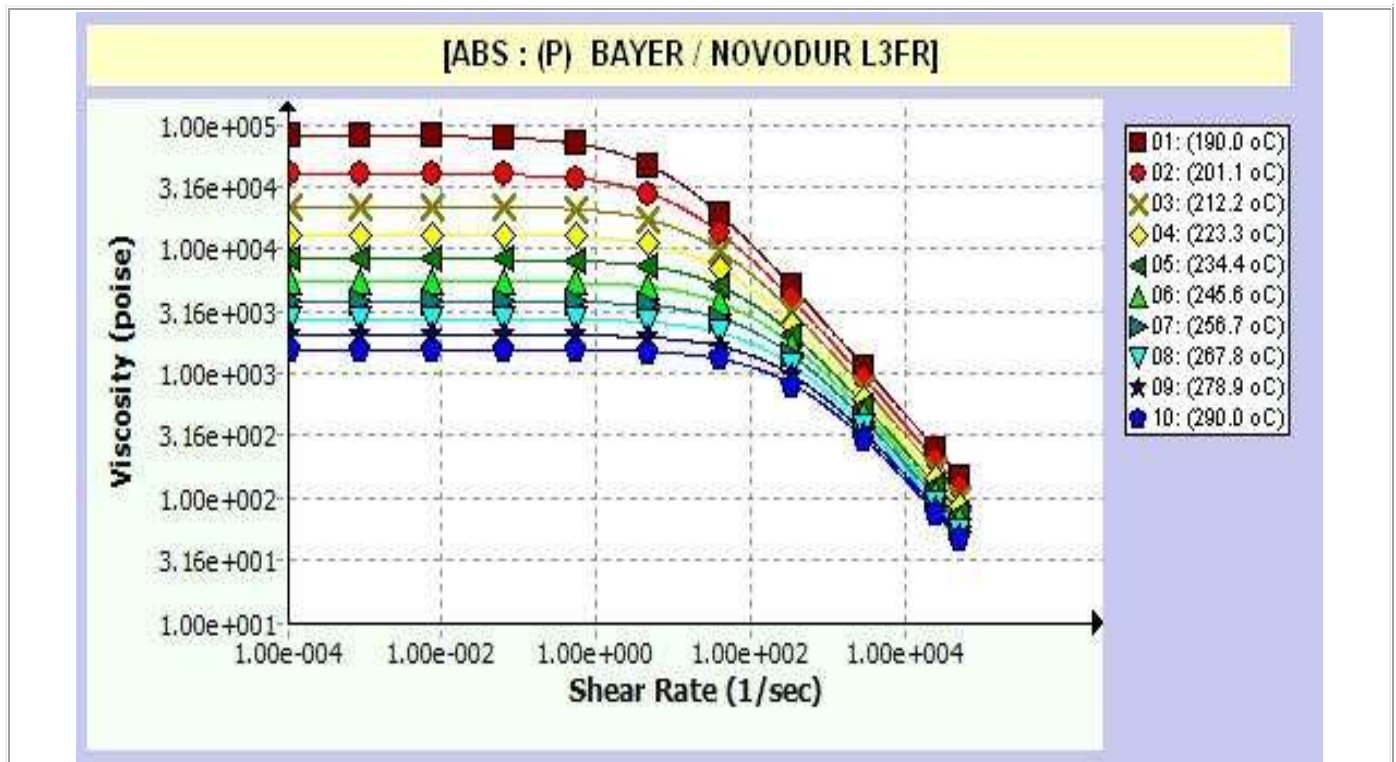
X direction displacement= 0.4088 mm (0.0161 in)
 Y direction displacement= 1.4959 mm (0.0589 in)
 Z direction displacement= 0.8735 mm (0.0344 in)
 Max. total displacement= 1.1763 mm (0.0463 in)

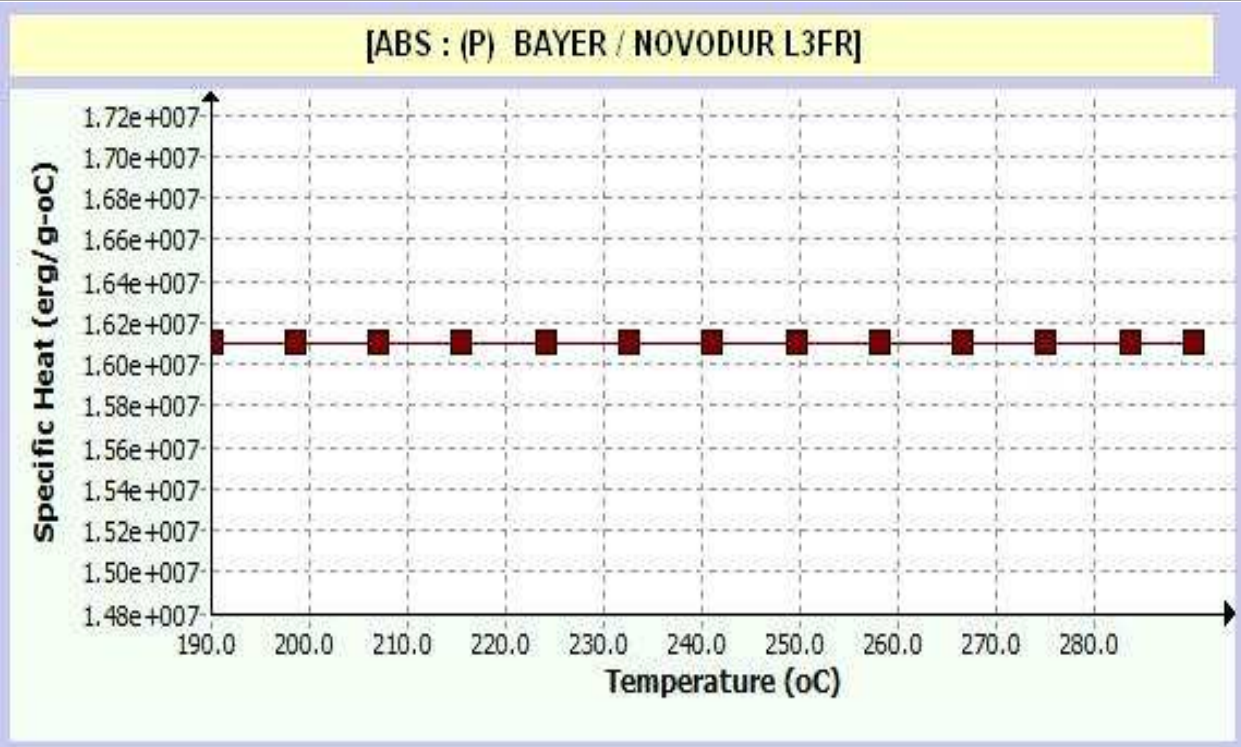
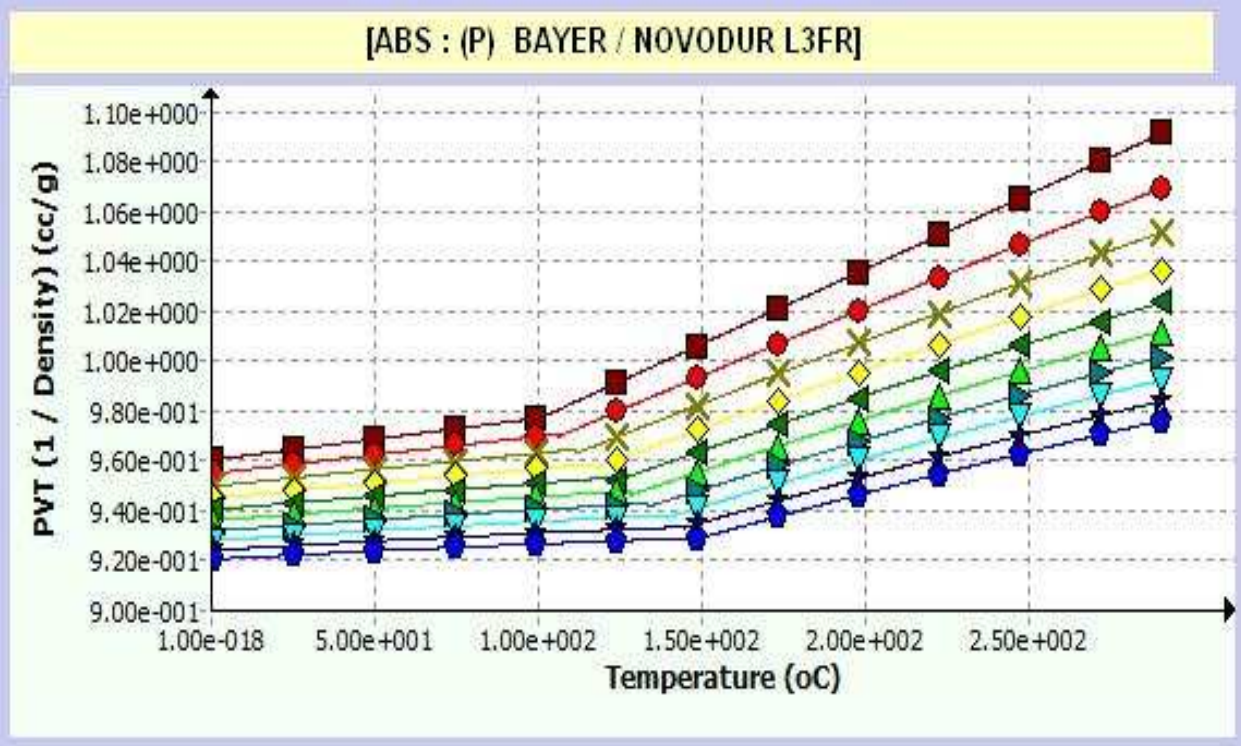
Sink mark range= -0.1407 ~ 0.0000 mm (-0.0055 ~ 0.0000 in)

CPU Time = 59.54 sec

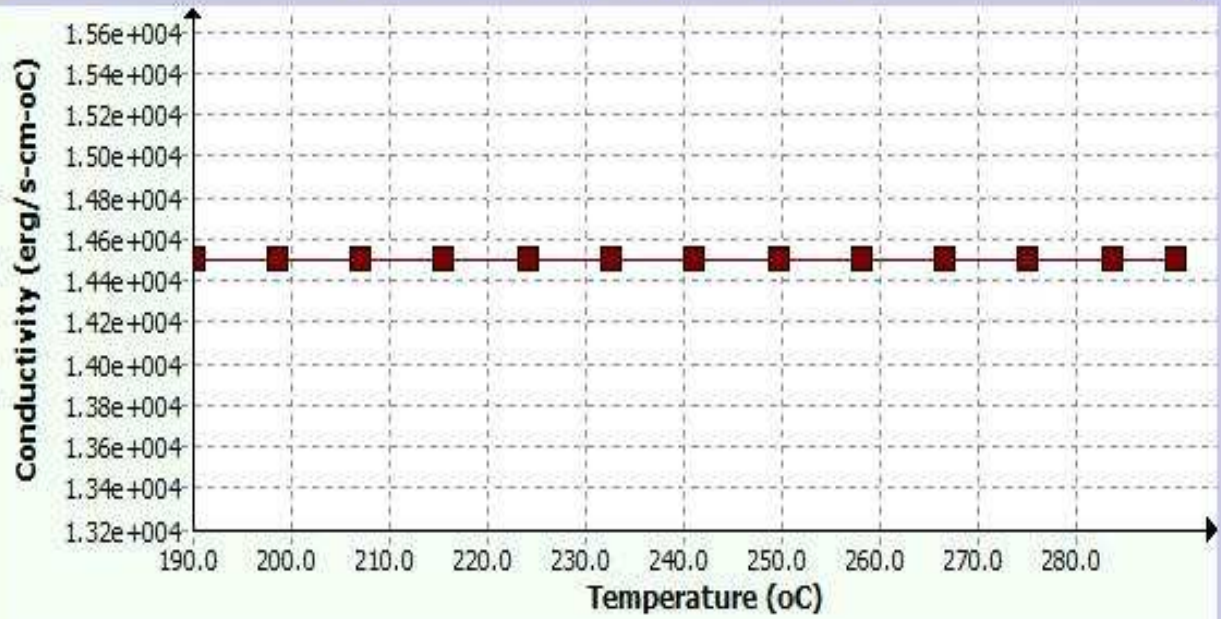
4. Special Note

5.1 Material Parameter (X-Y Plot)

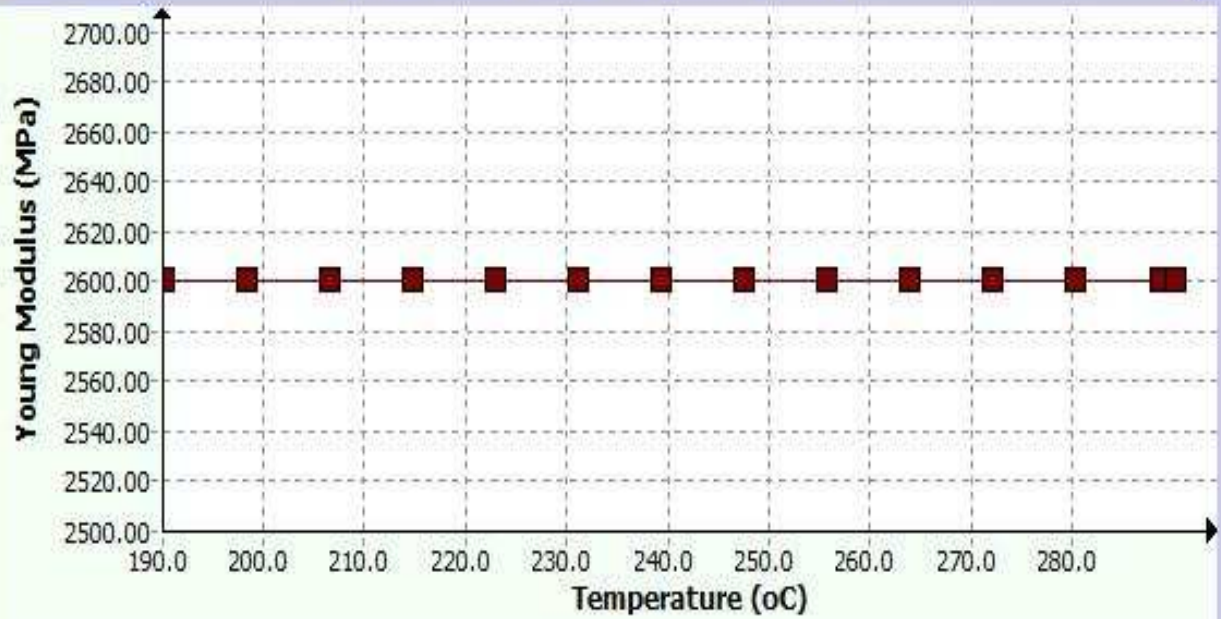


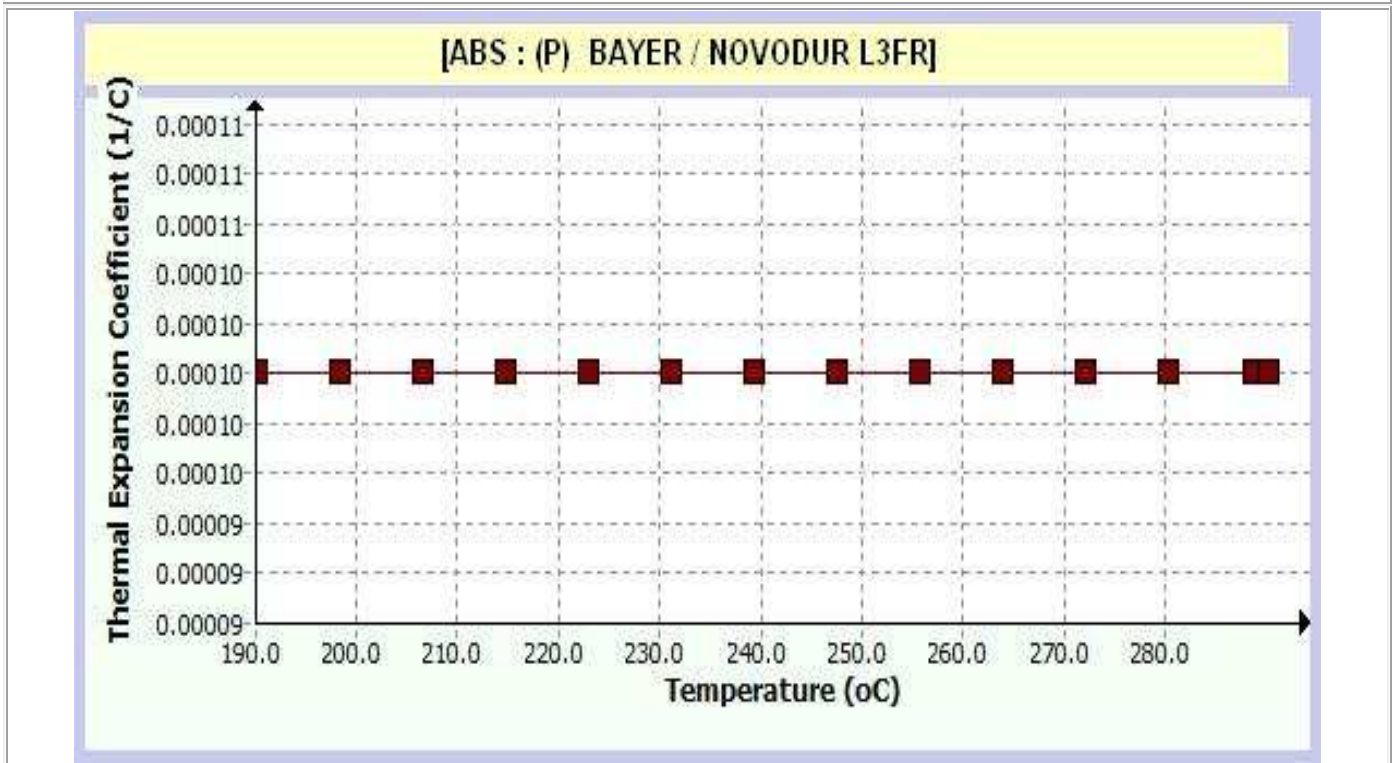
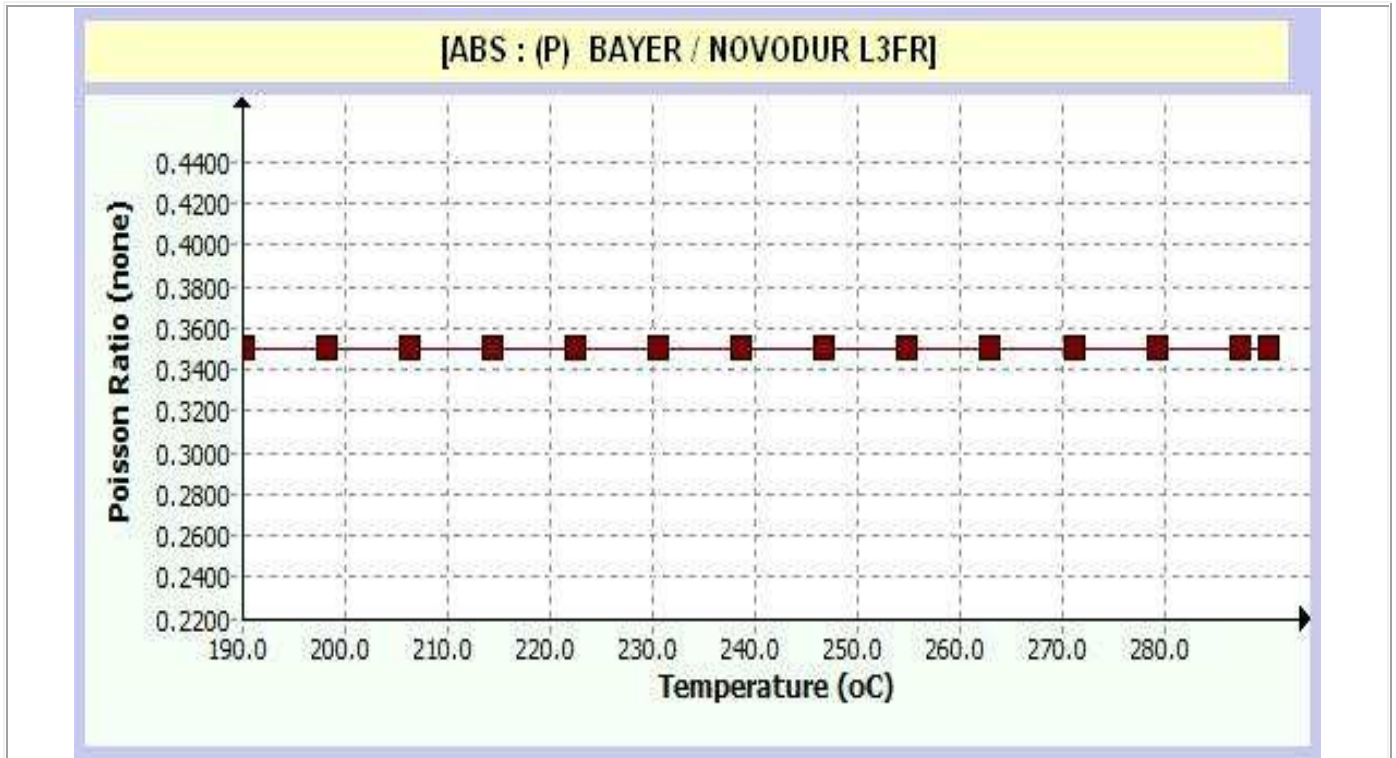


[ABS : (P) BAYER / NOVODUR L3FR]



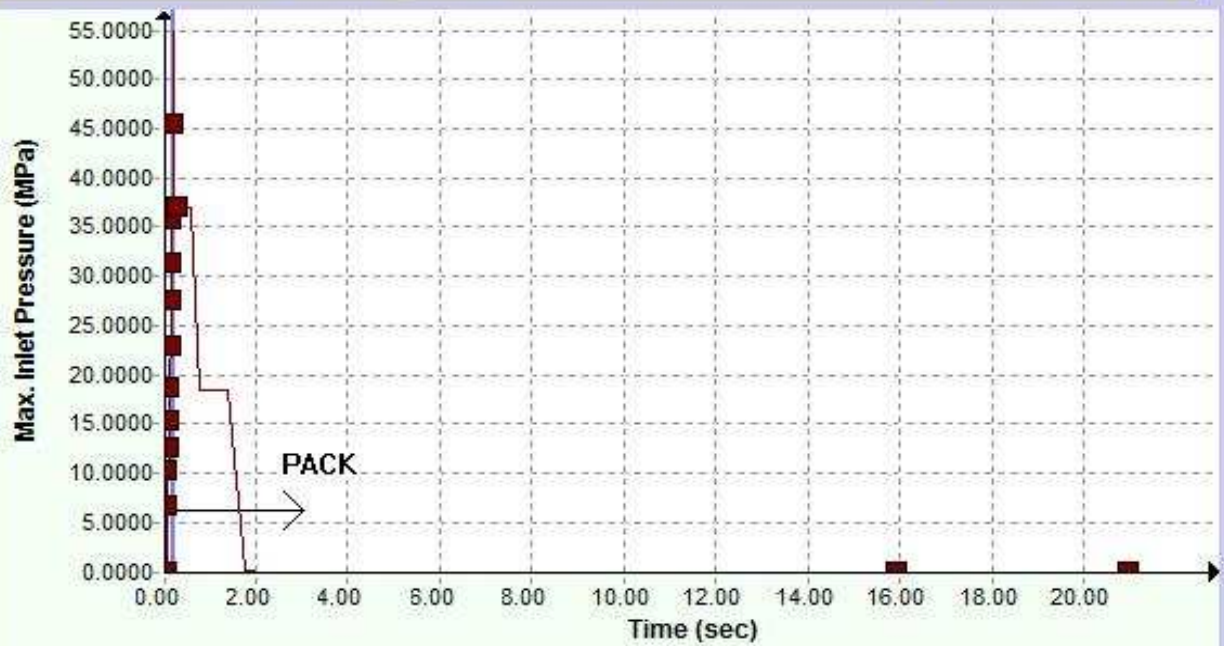
[ABS : (P) BAYER / NOVODUR L3FR]





5.2 Result (X-Y Plot)

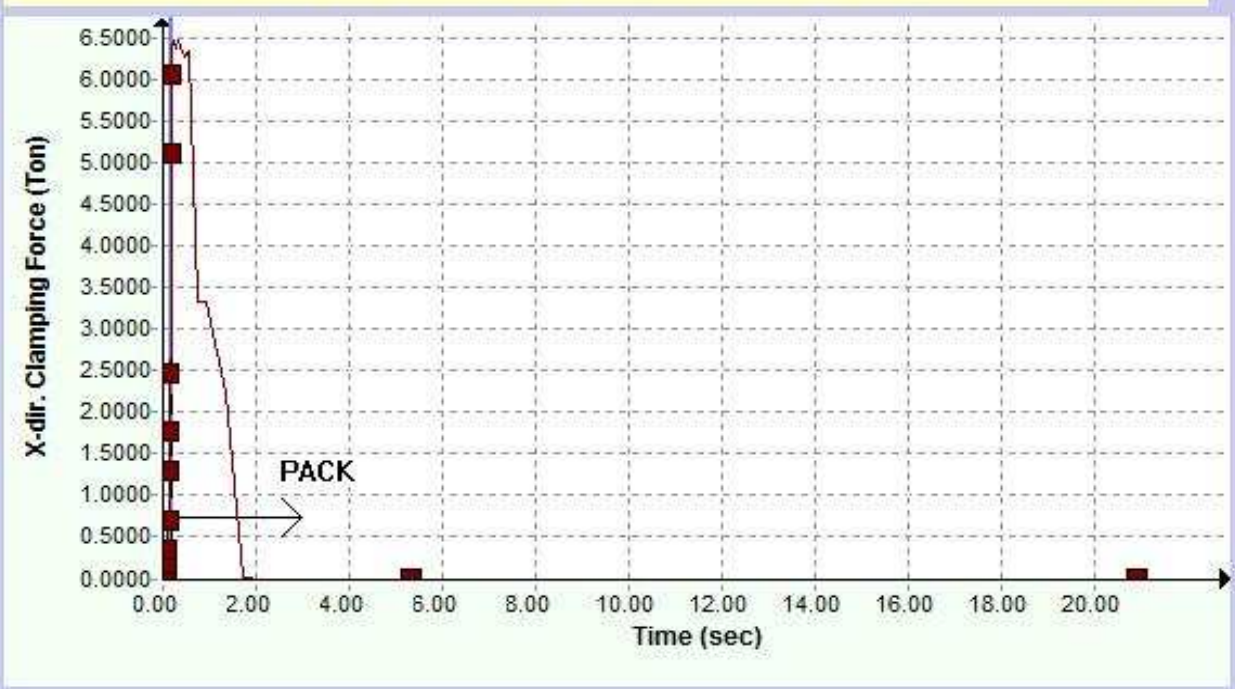
oekaart\Documents\ - SOLIDWORKS \-MODELLEN\Afstandsbediening\onderkant : Max. Ir



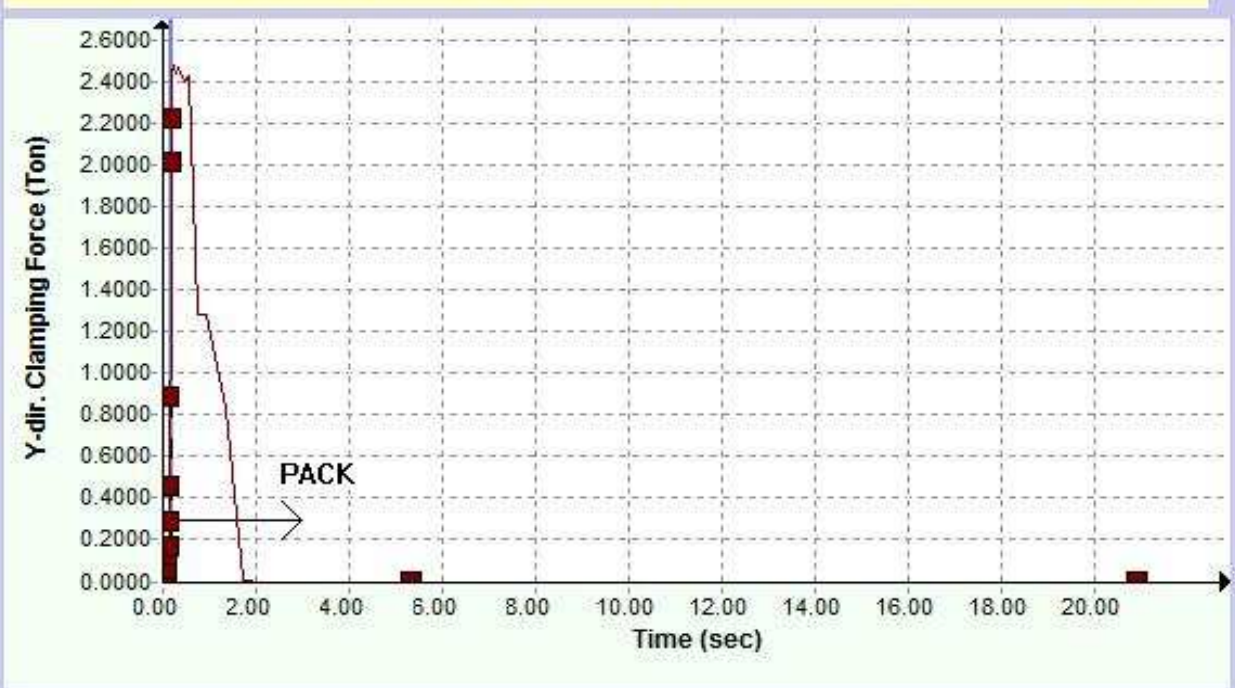
Broekaart\Documents\ - SOLIDWORKS \-MODELLEN\Afstandsbediening\onderkant : Inlet



ekaart\Documents\ - SOLIDWORKS -\MODELLEN\Afstandsbediening\onderkant : X-dir. Cl.



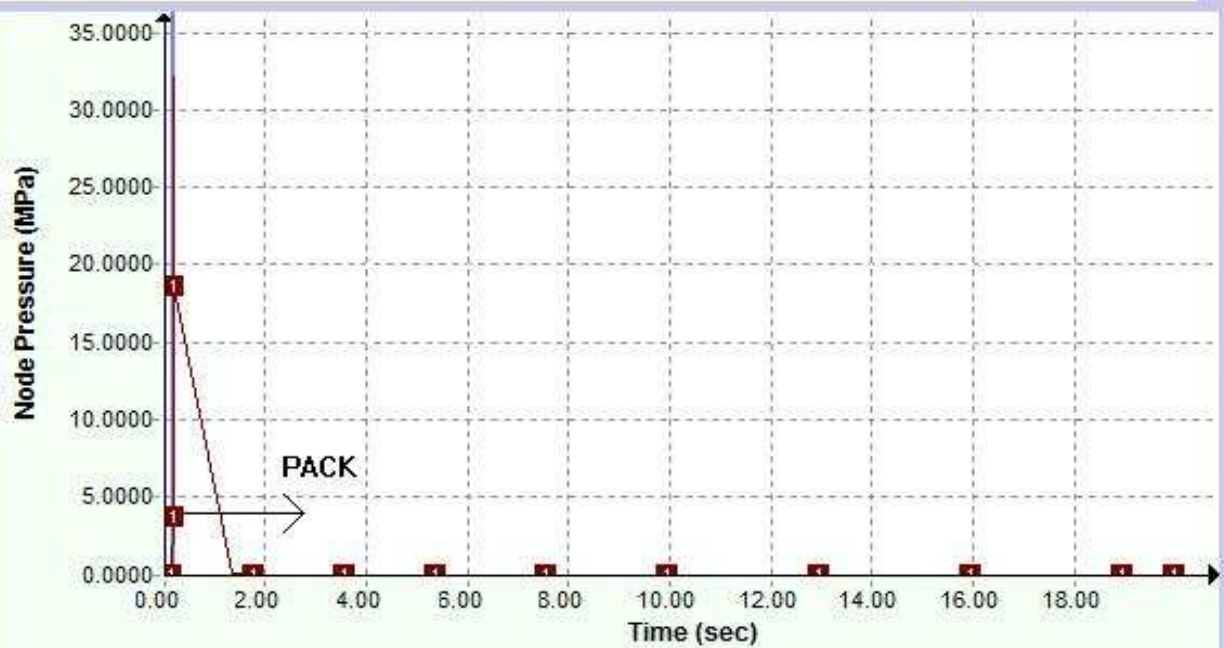
ekaart\Documents\ - SOLIDWORKS -\MODELLEN\Afstandsbediening\onderkant : Y-dir. Cl.



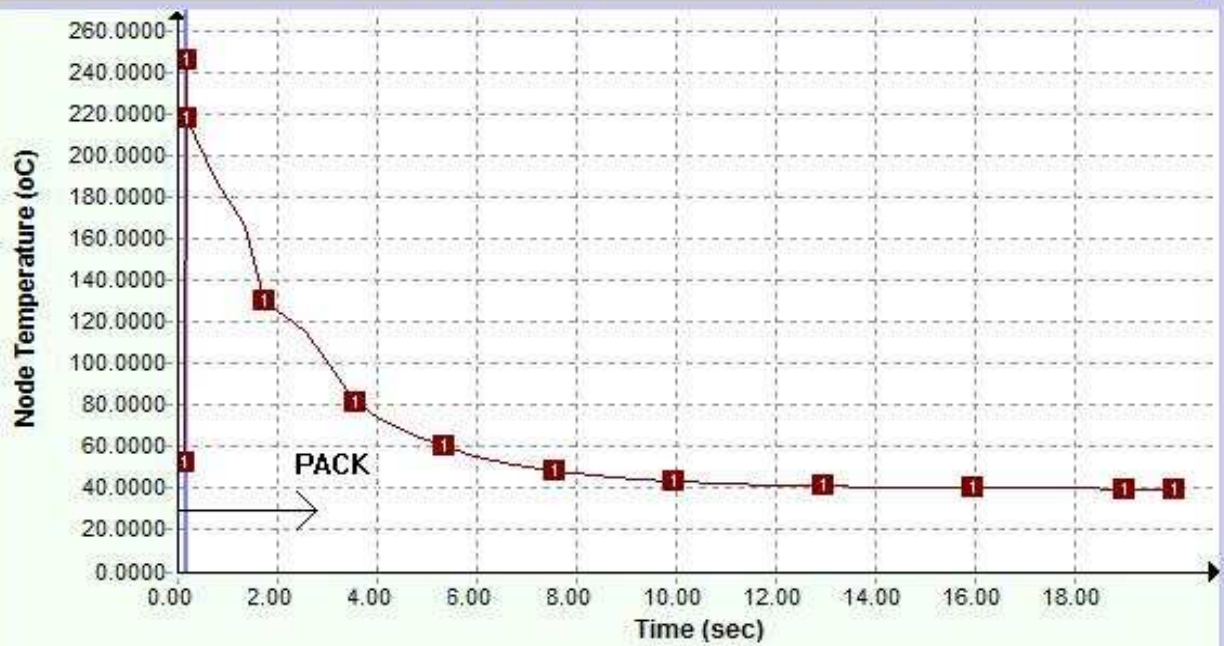
ekaart\Documents\ - SOLIDWORKS \MODELLEN\Afstandsbediening\onderkant : Z-dir. Cl.



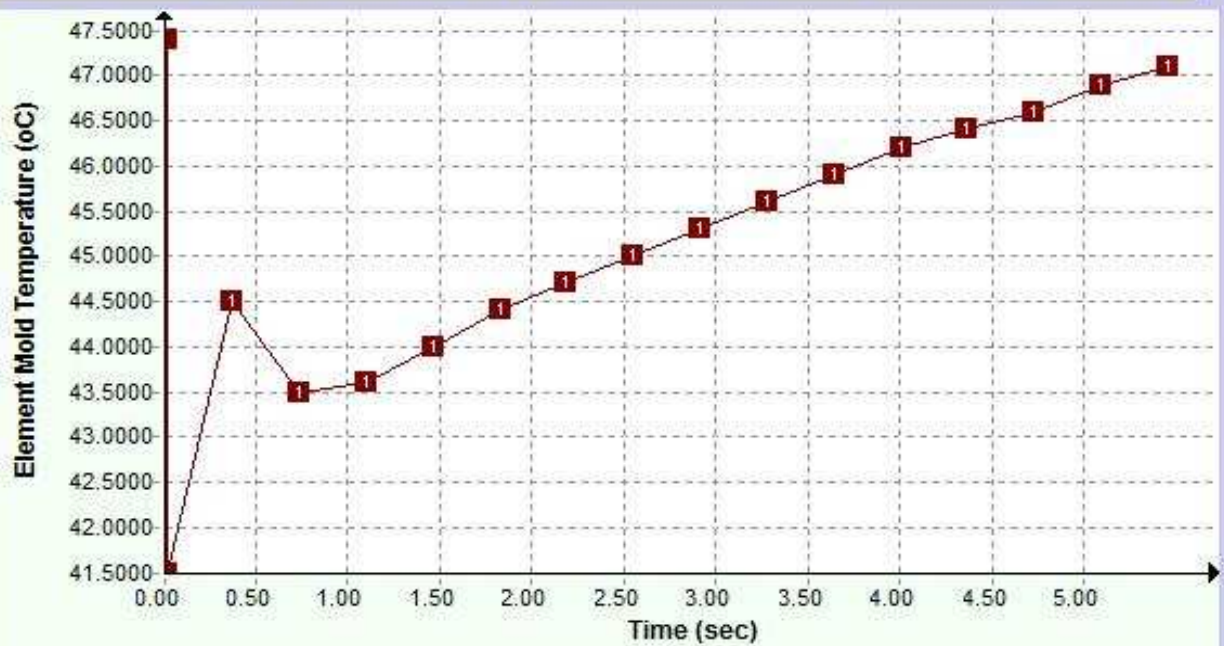
Broekaart\Documents\ - SOLIDWORKS \MODELLEN\Afstandsbediening\onderkant : Node



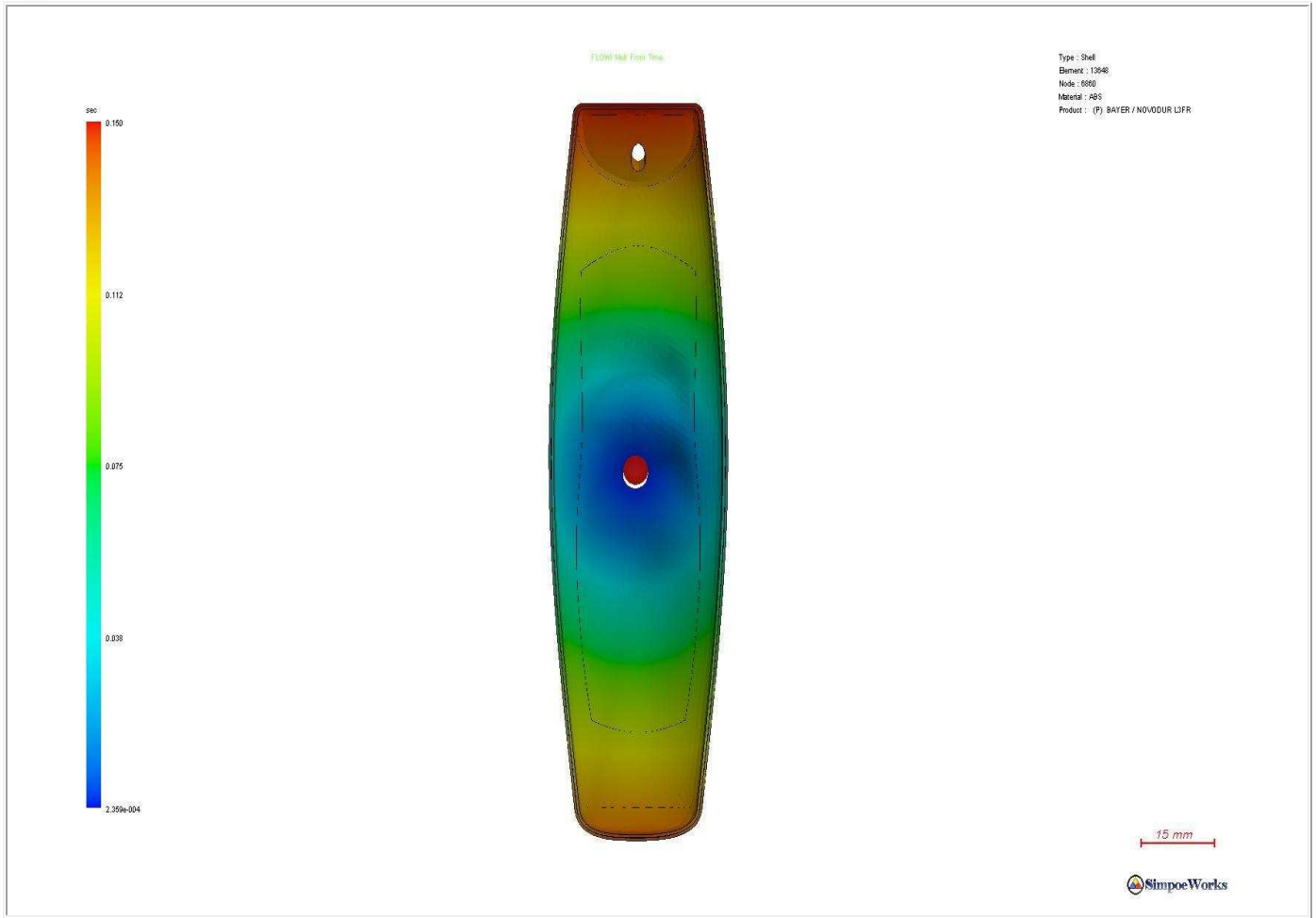
oe kaart\Documents\ - SOLIDWORKS -MODELLEN\Afstandsbediening\onderkant : Node T

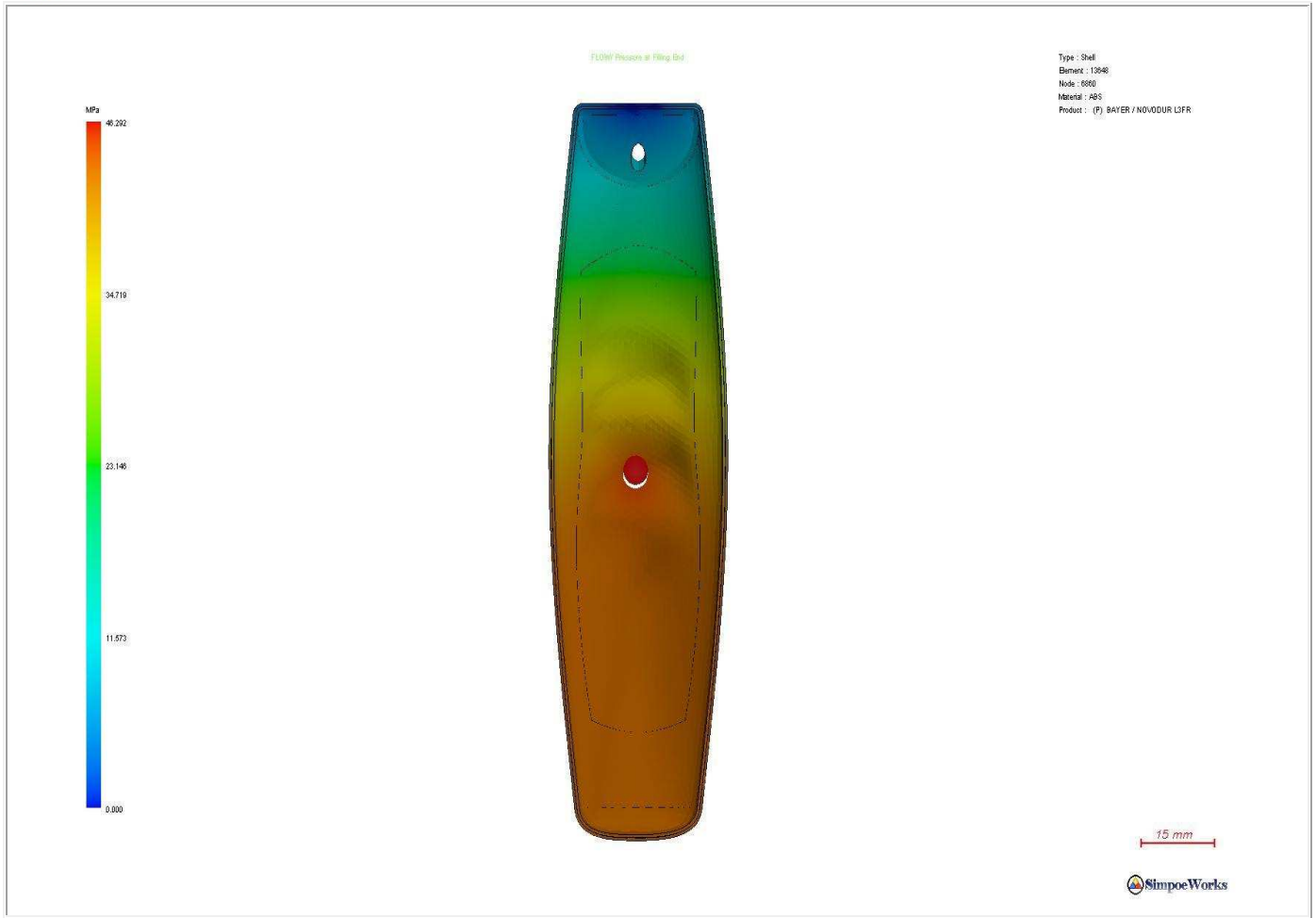


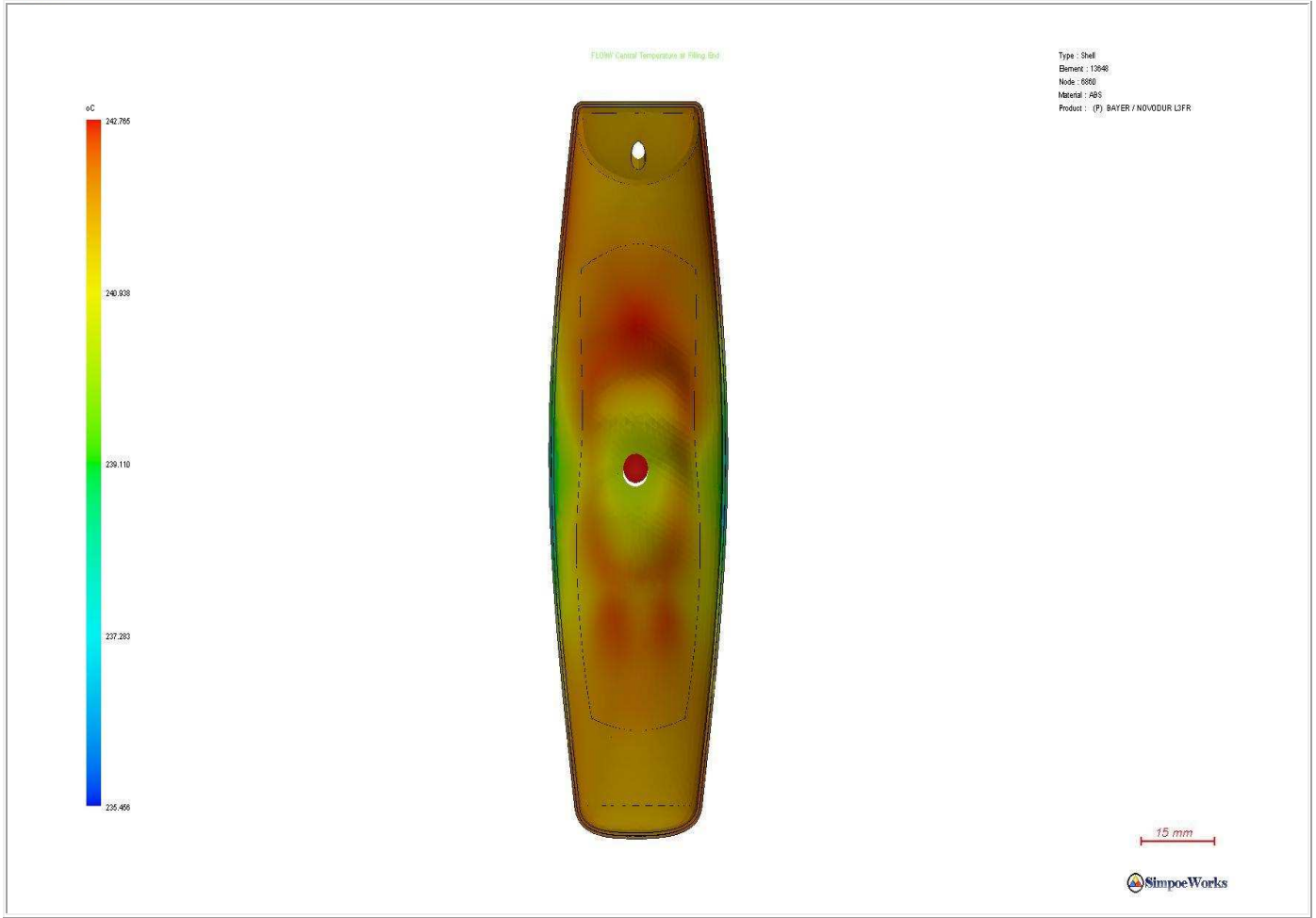
art\Documents\ - SOLIDWORKS -MODELLEN\Afstandsbediening\onderkant : Element M

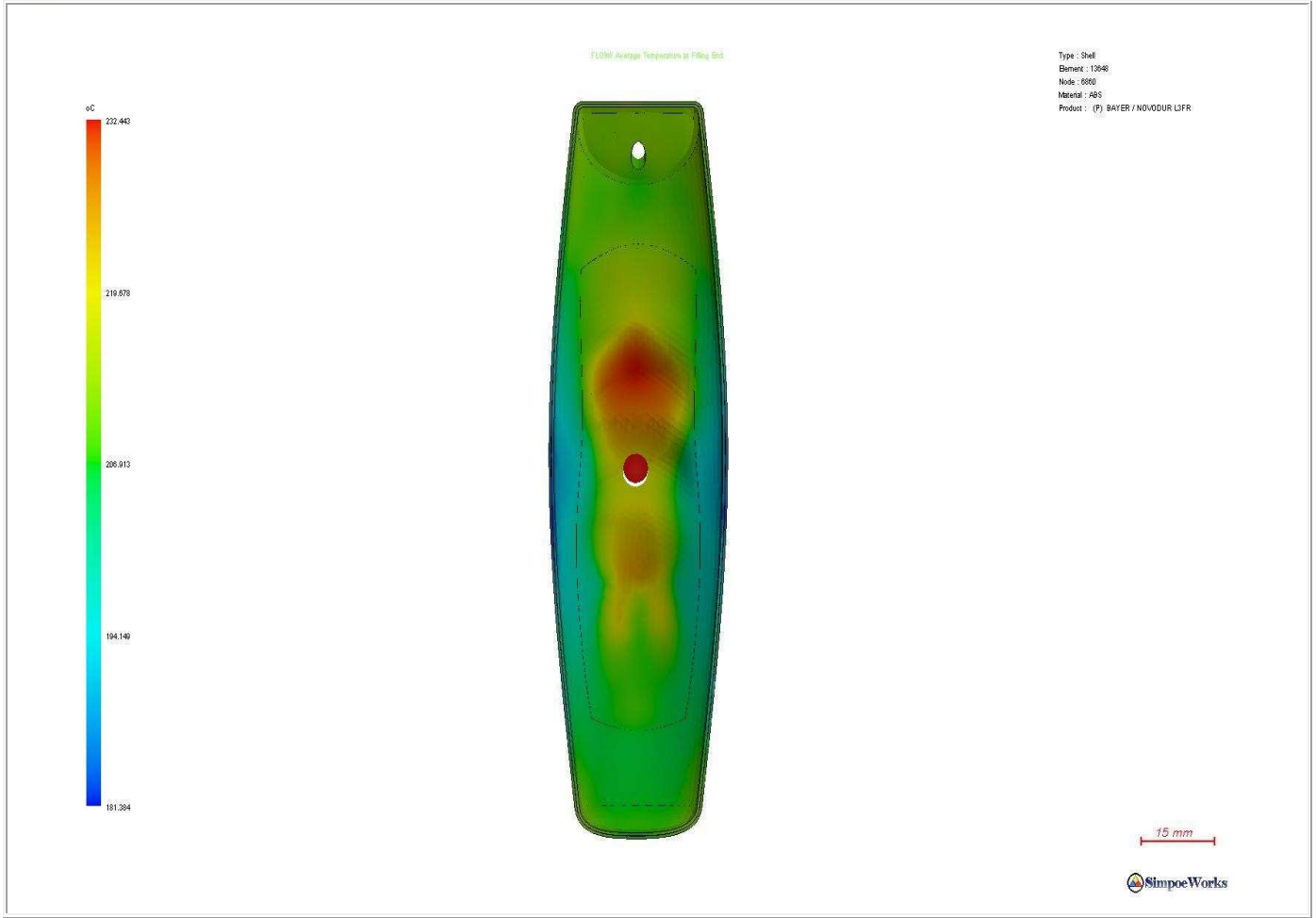


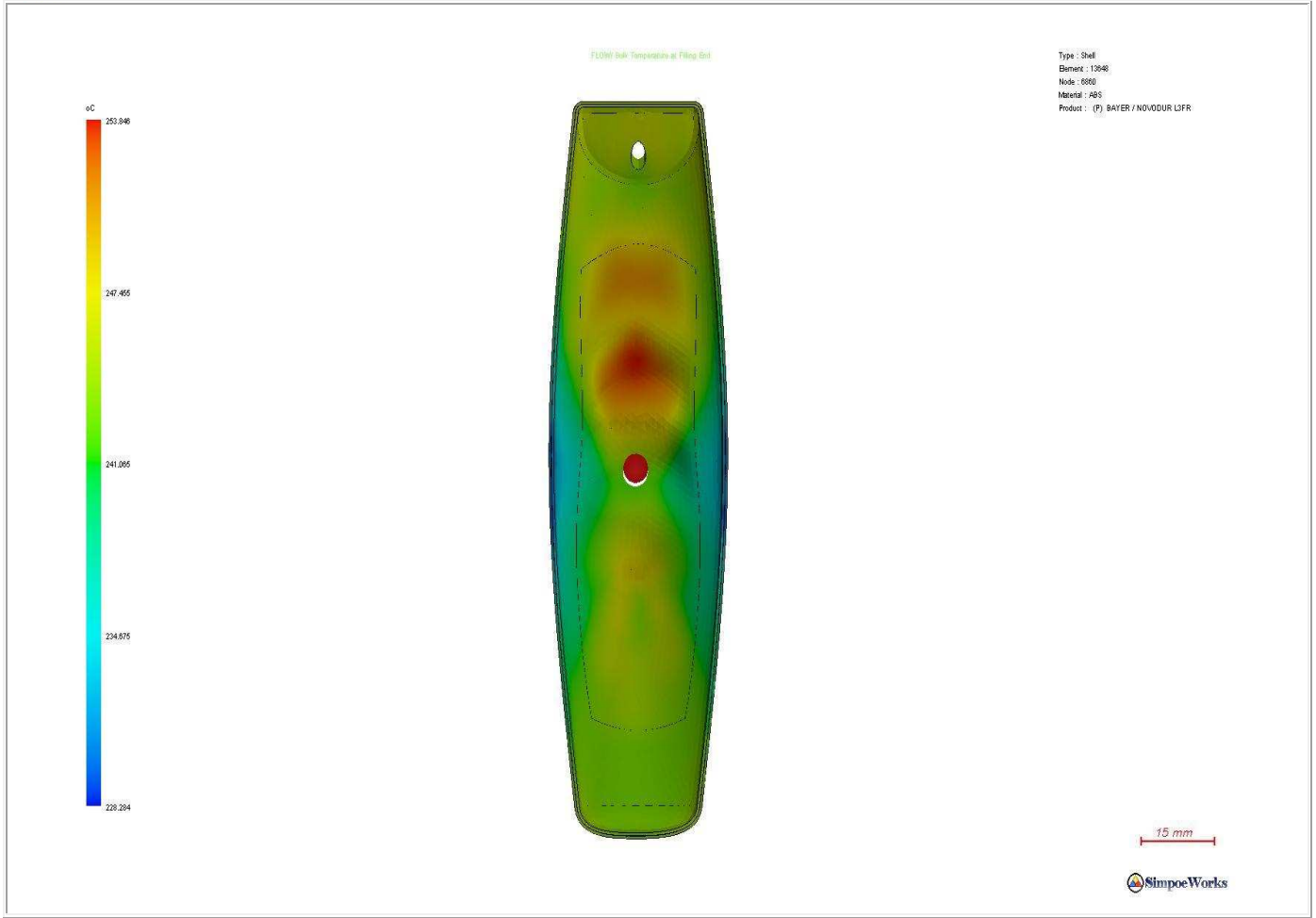
5.3 FLOW (3D Model view)

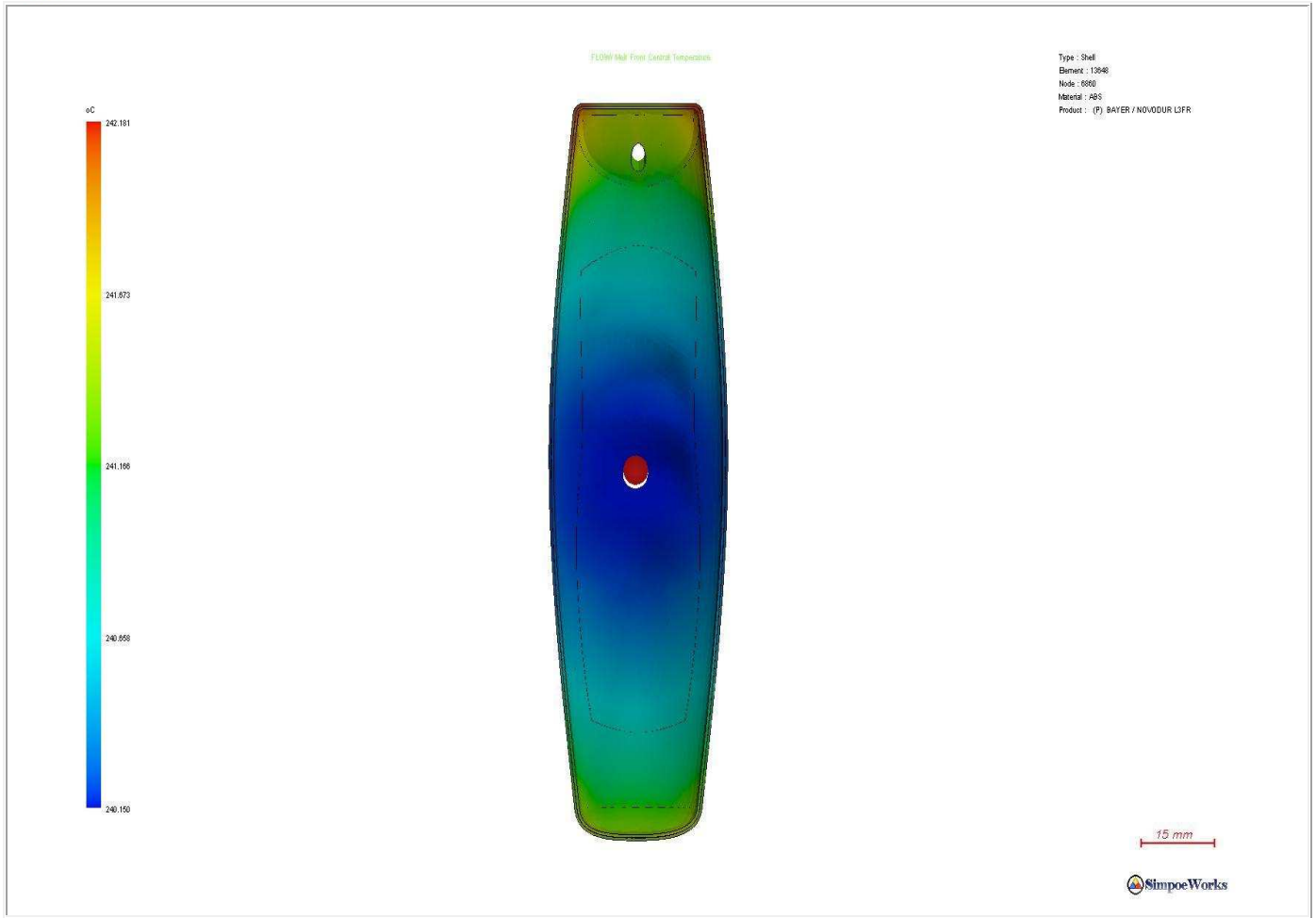


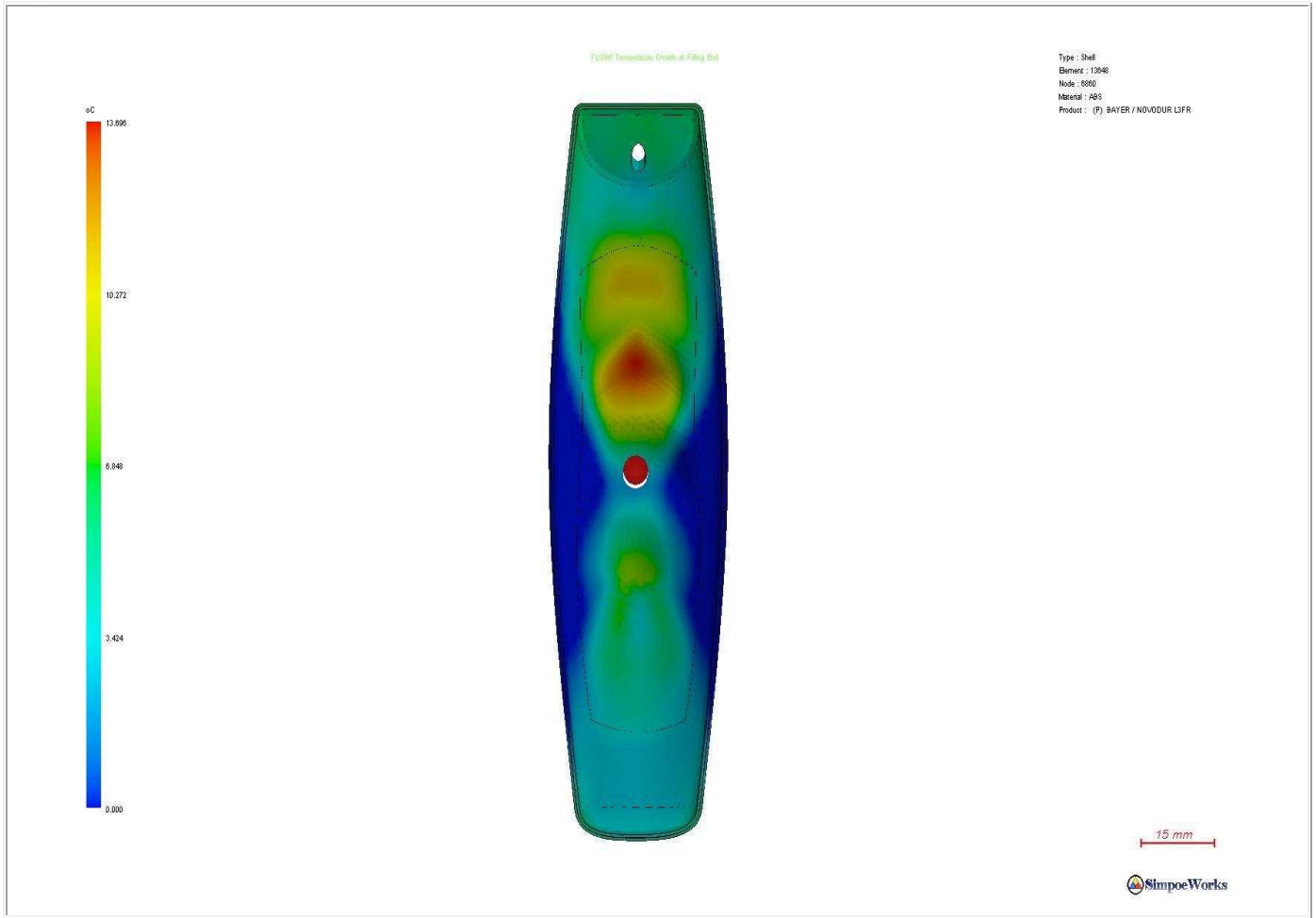


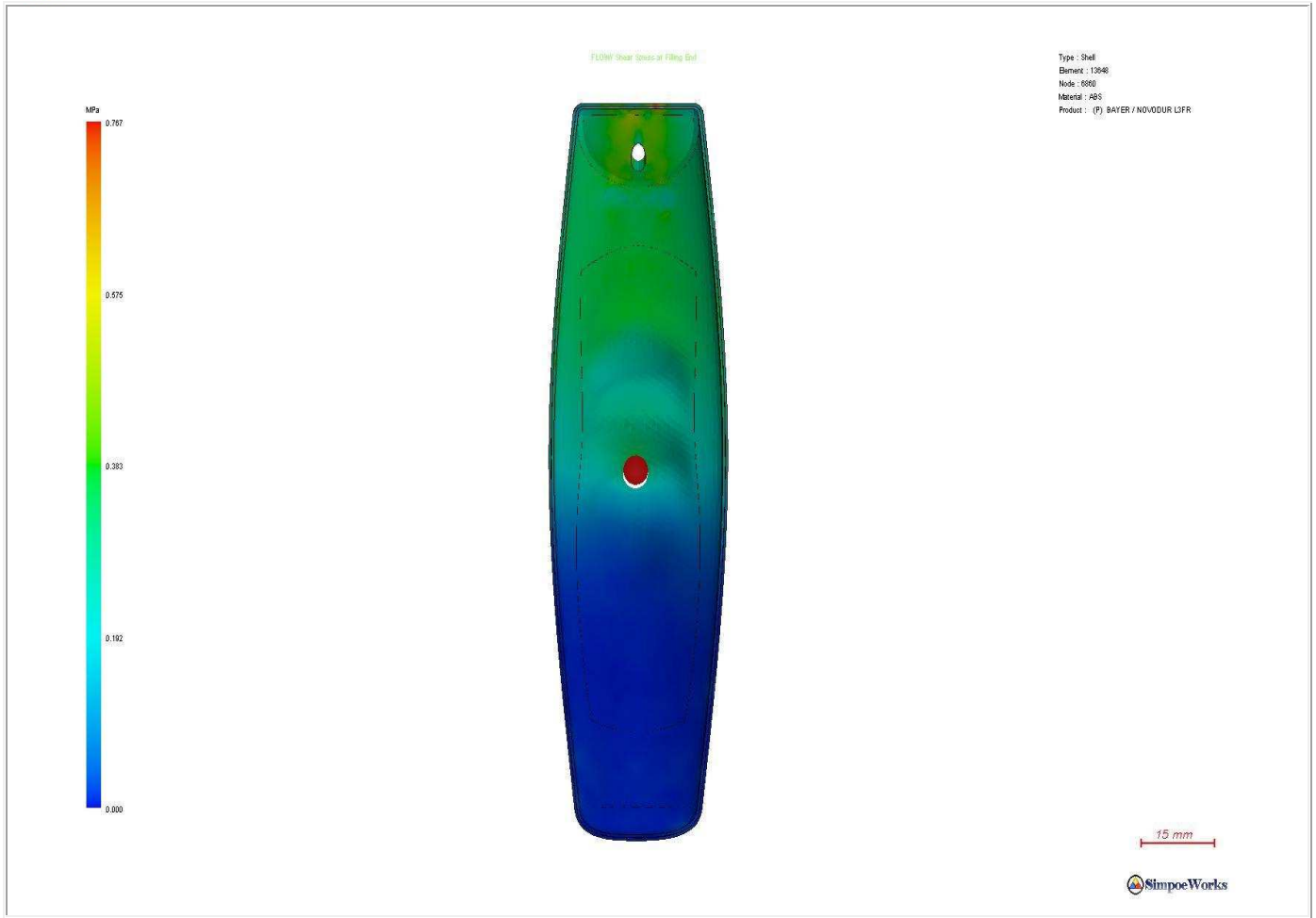


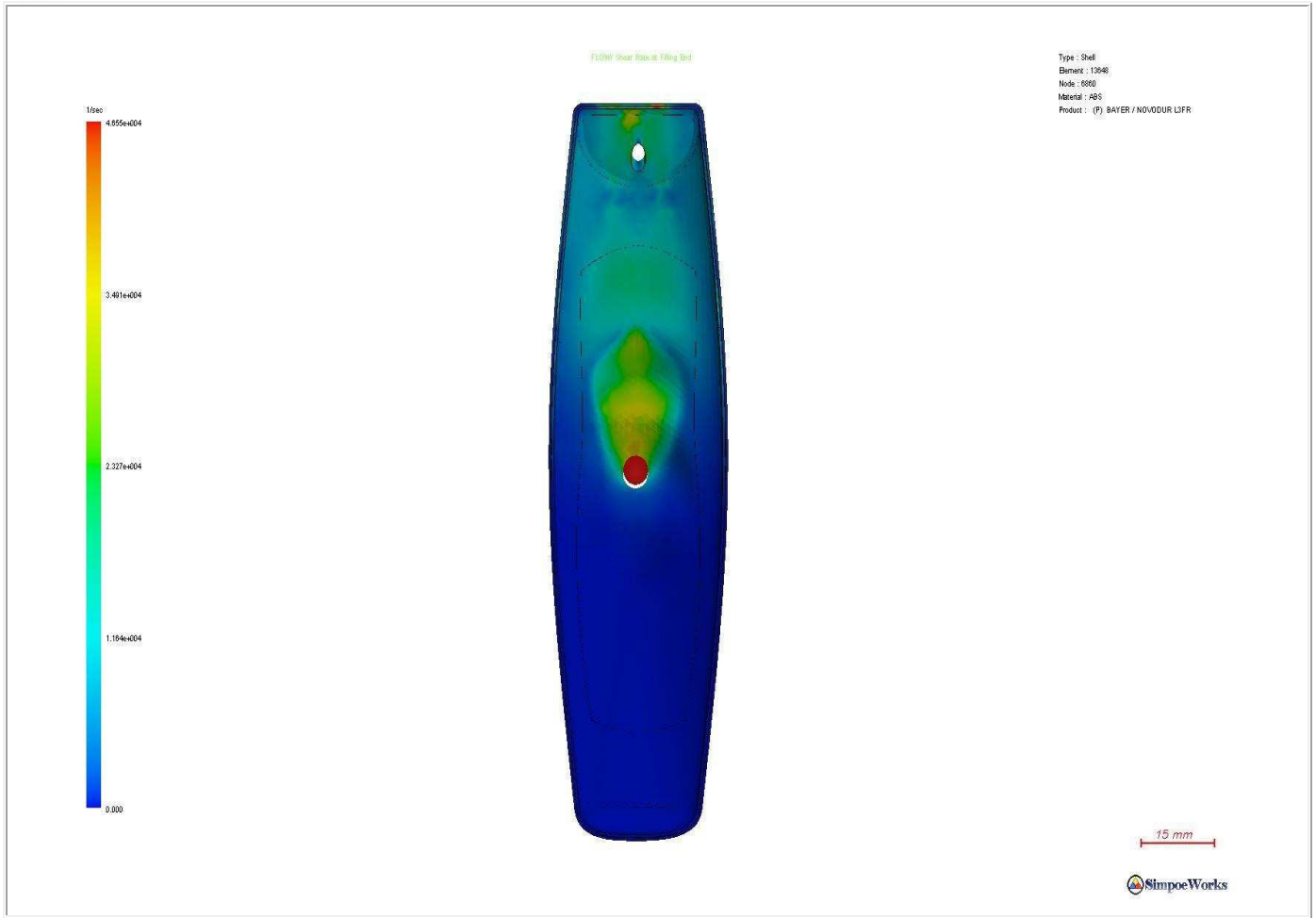


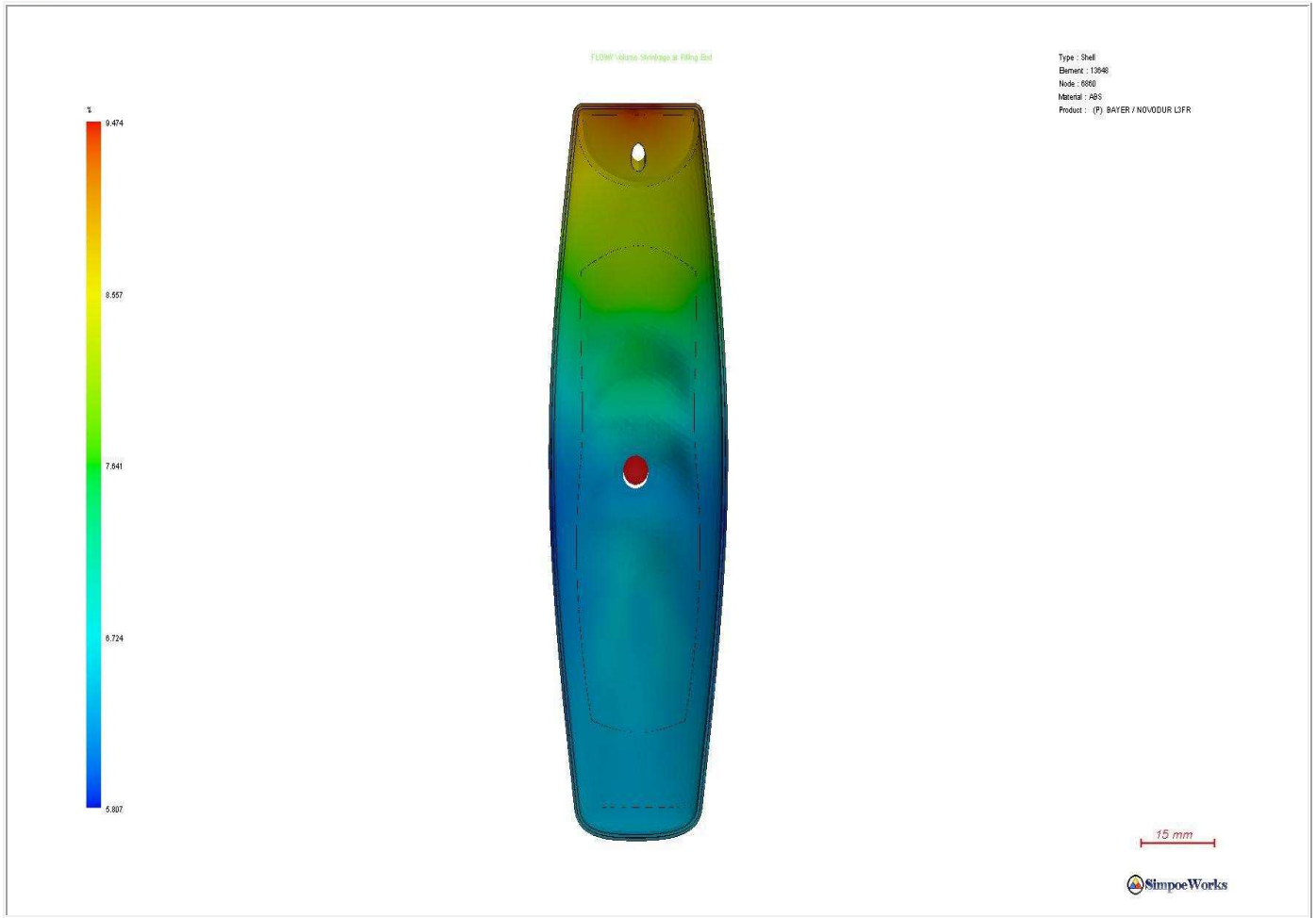






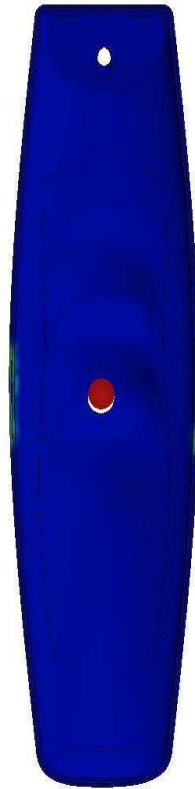
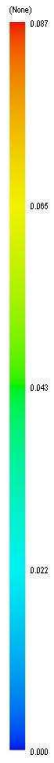




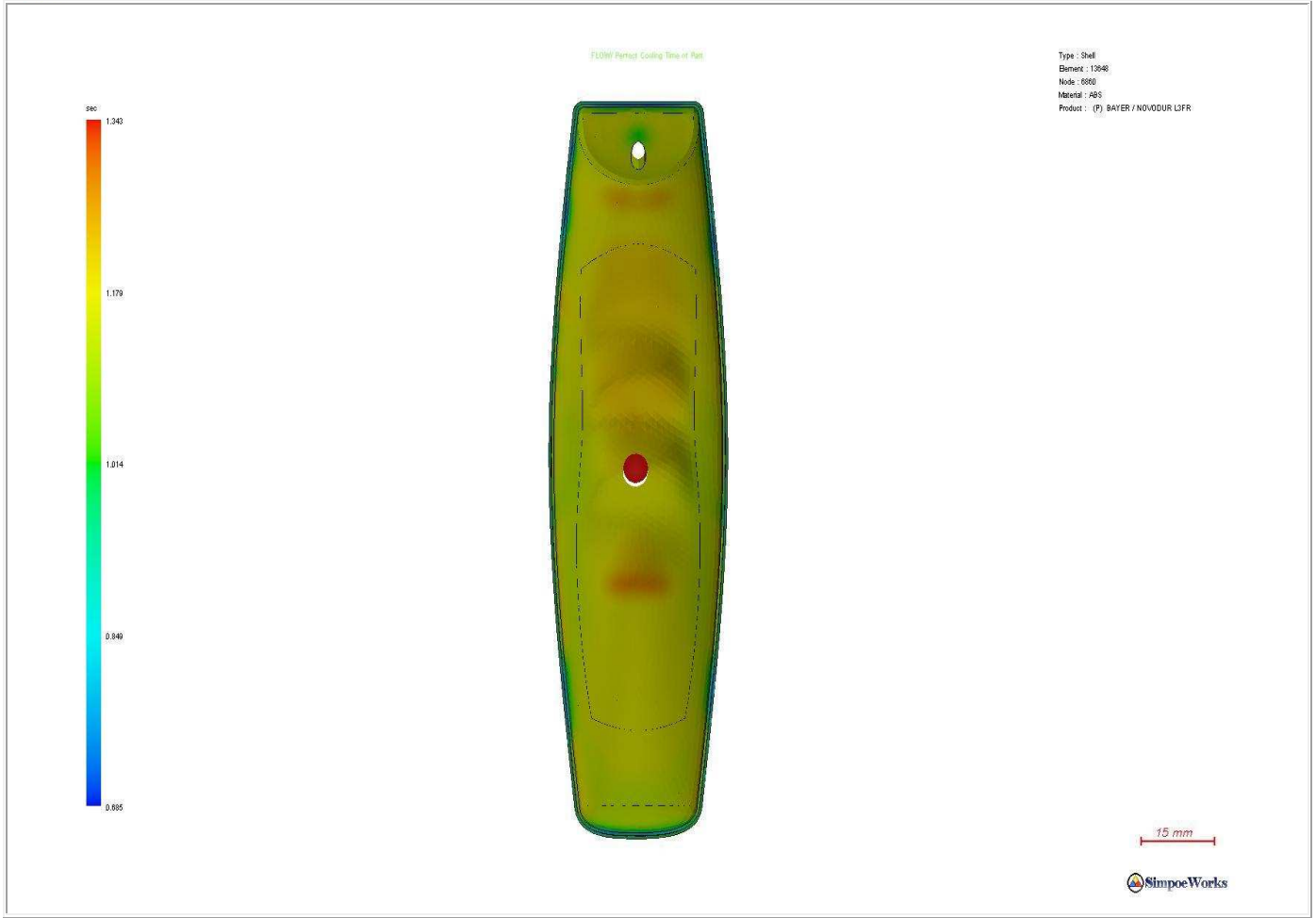


FLOW Froge Bayer trocken at Filig Btl

Type : Shell
Element : 13648
Node : 860
Material : ABS
Product : (F) BAYER / NOVODUR LFR

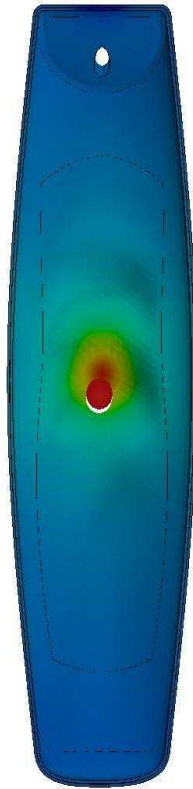


15 mm

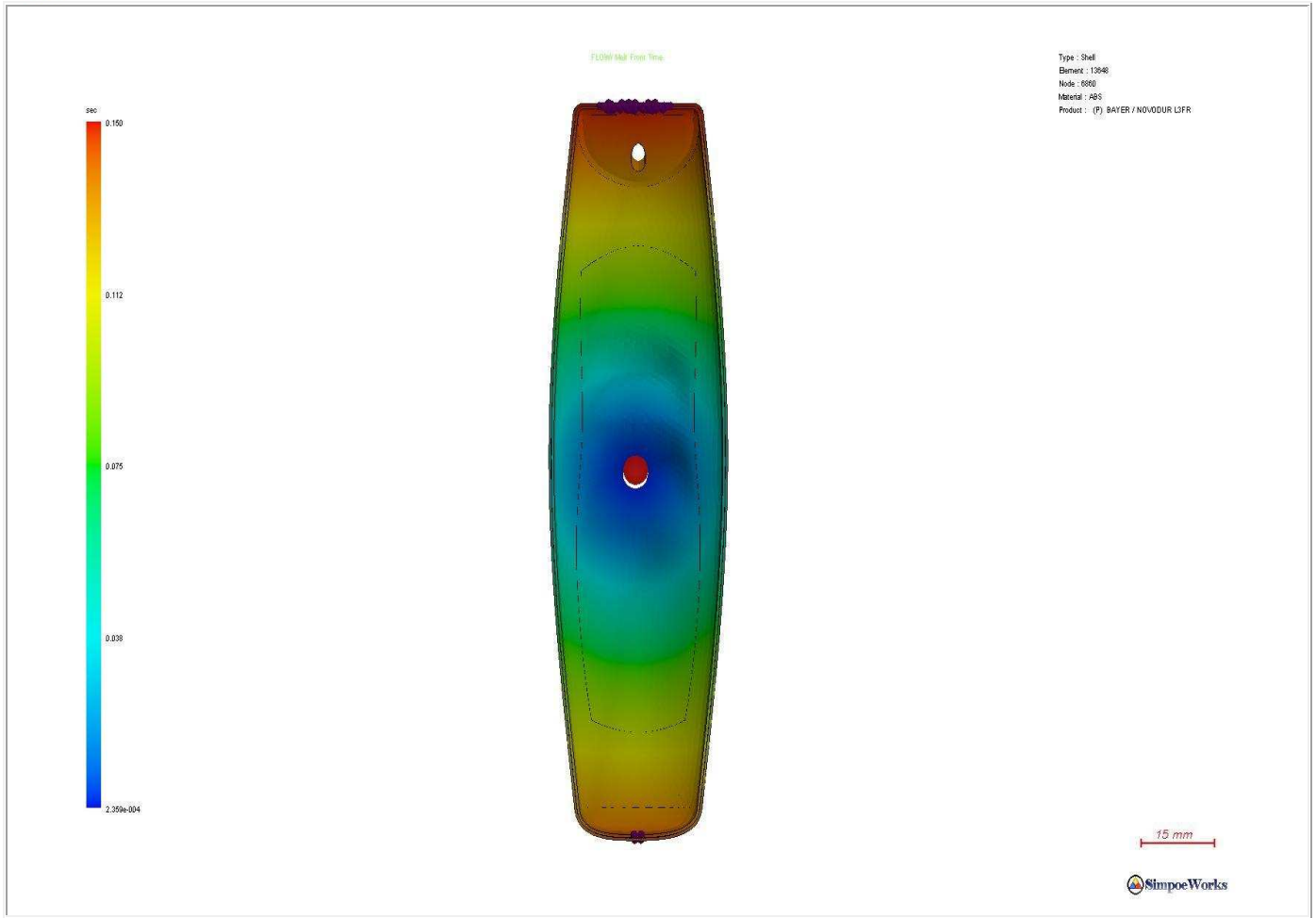


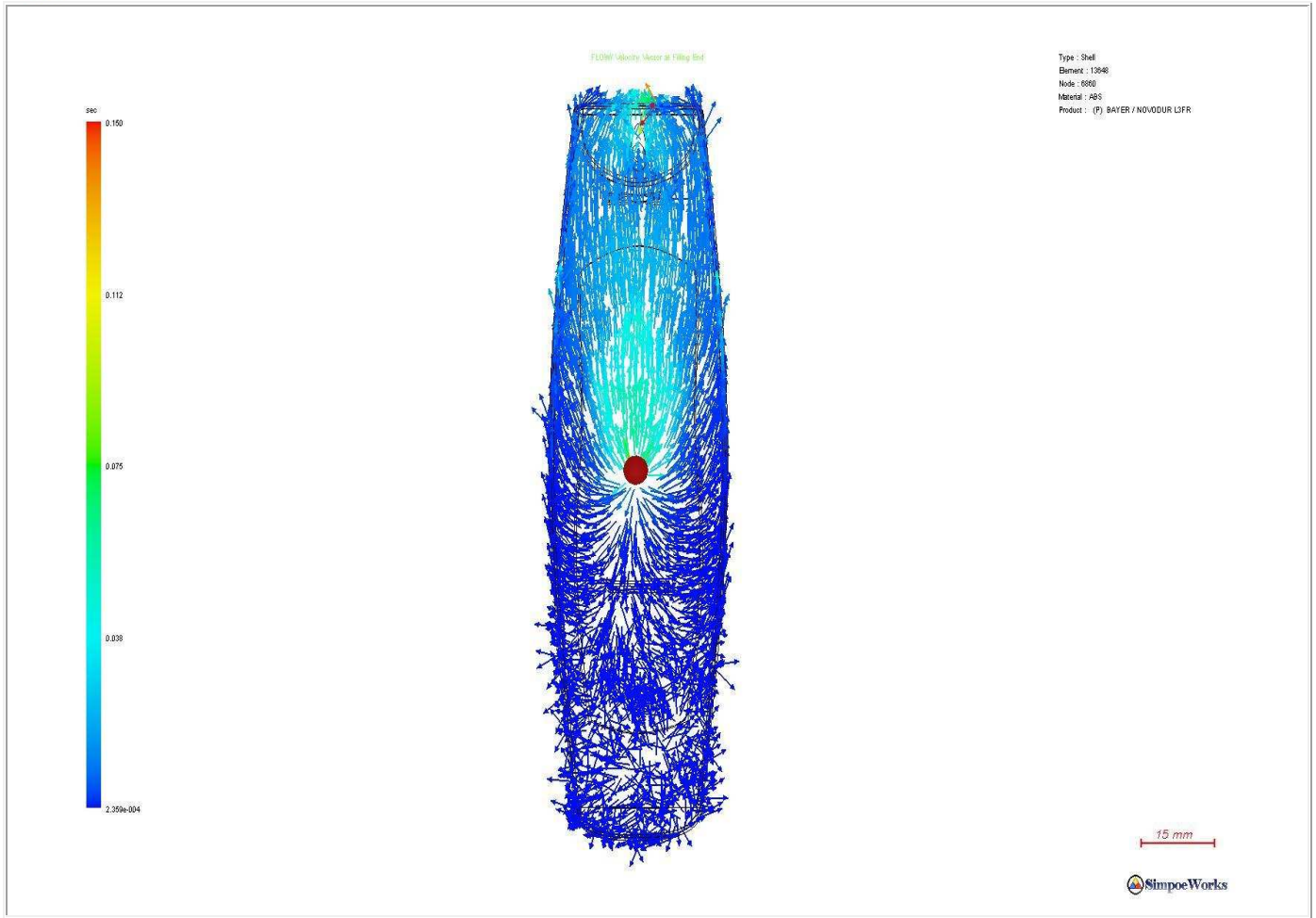
FLOW (axis Location: Party Inter)

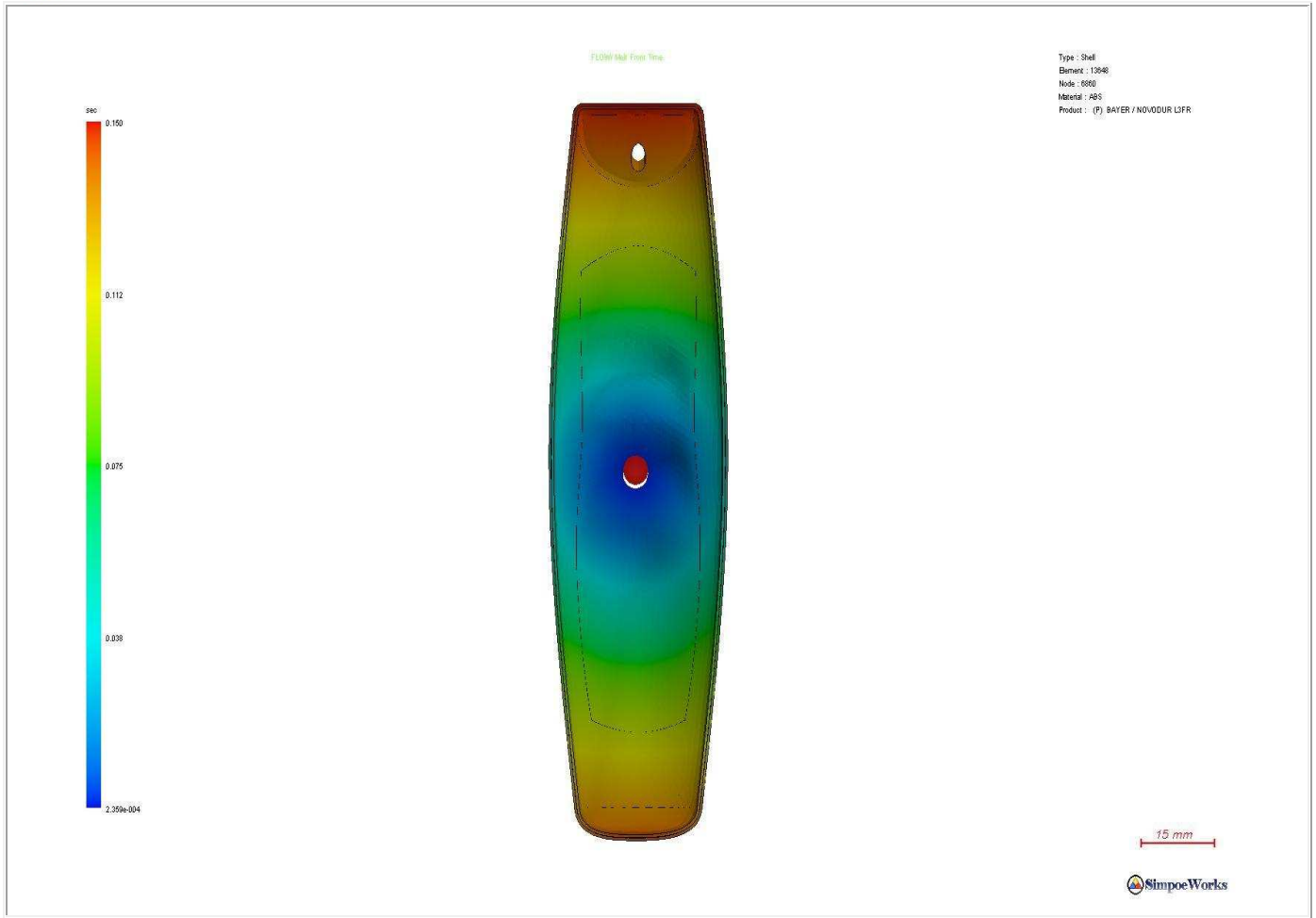
Type: Shell
Element: 13048
Node: 890
Material: ABS
Product: (P) BAYER / NOVODUR LFR



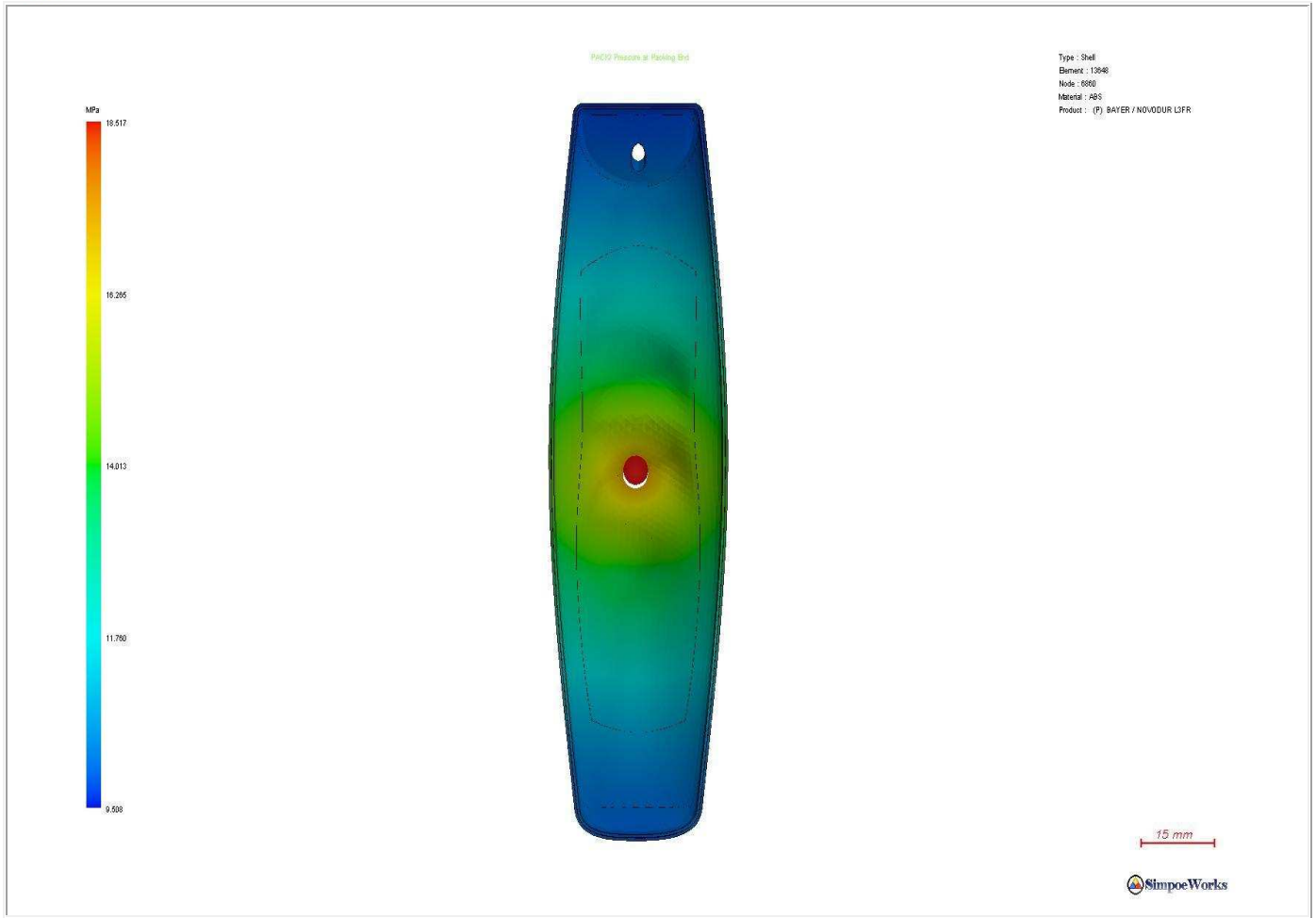
15 mm

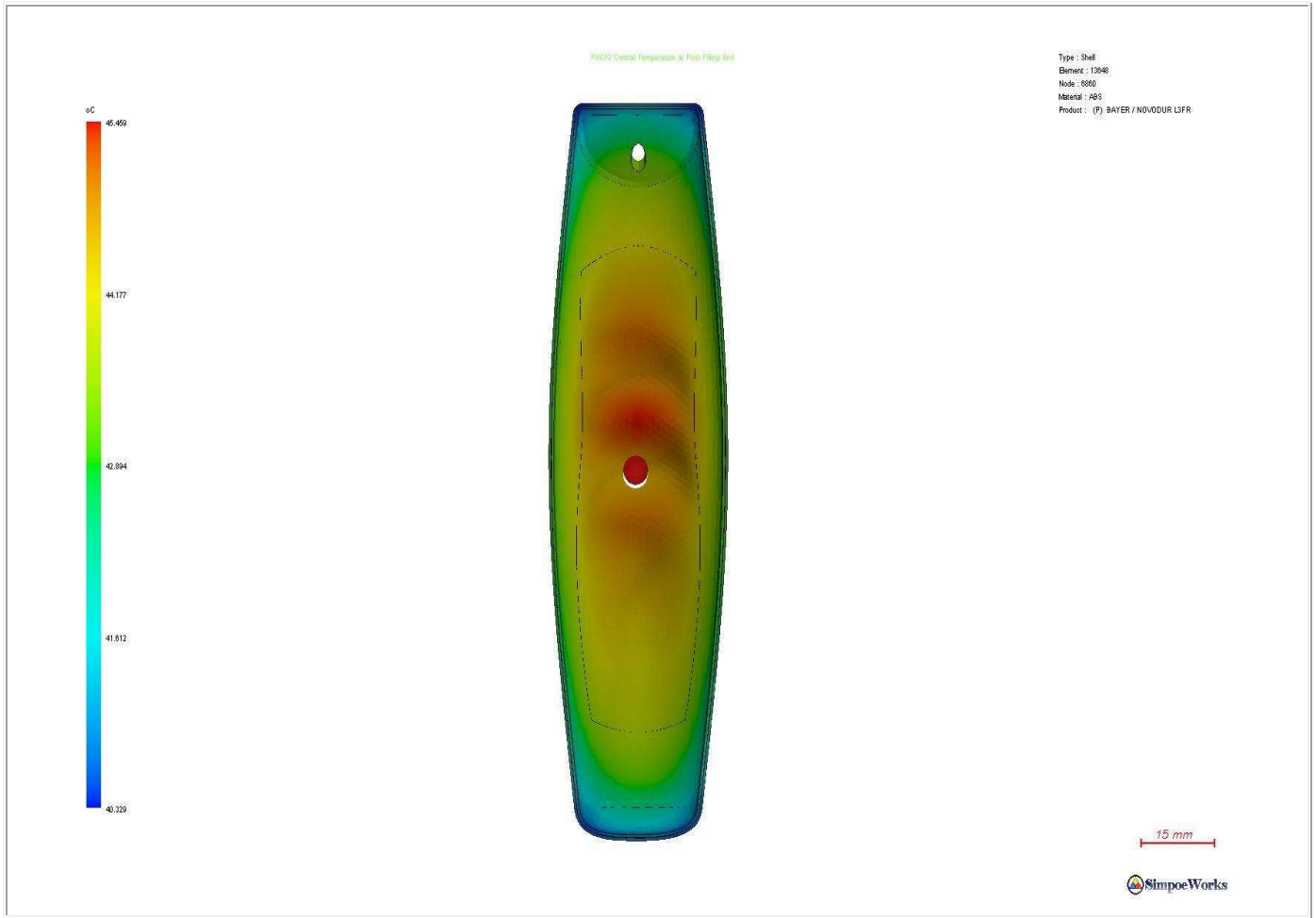


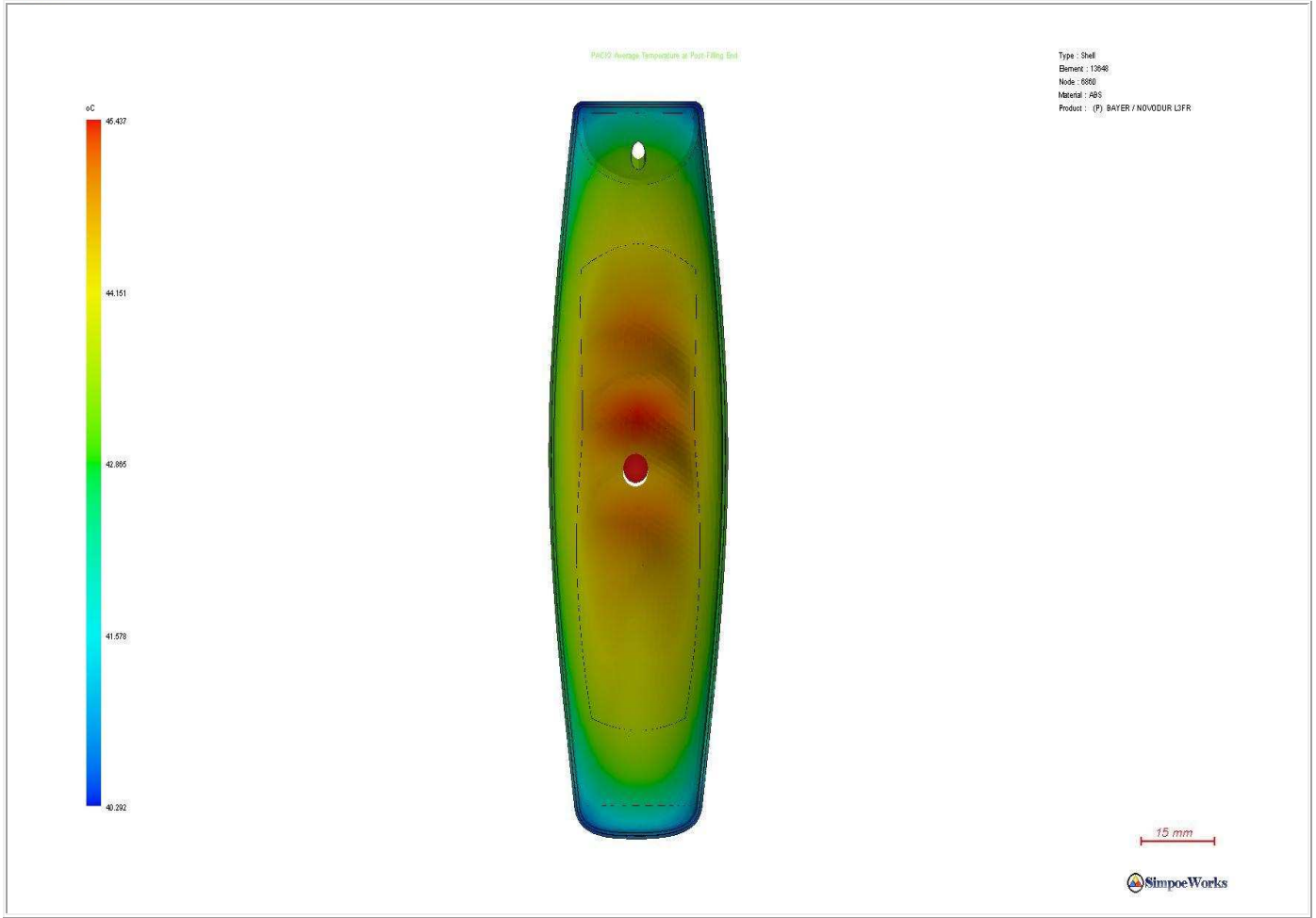


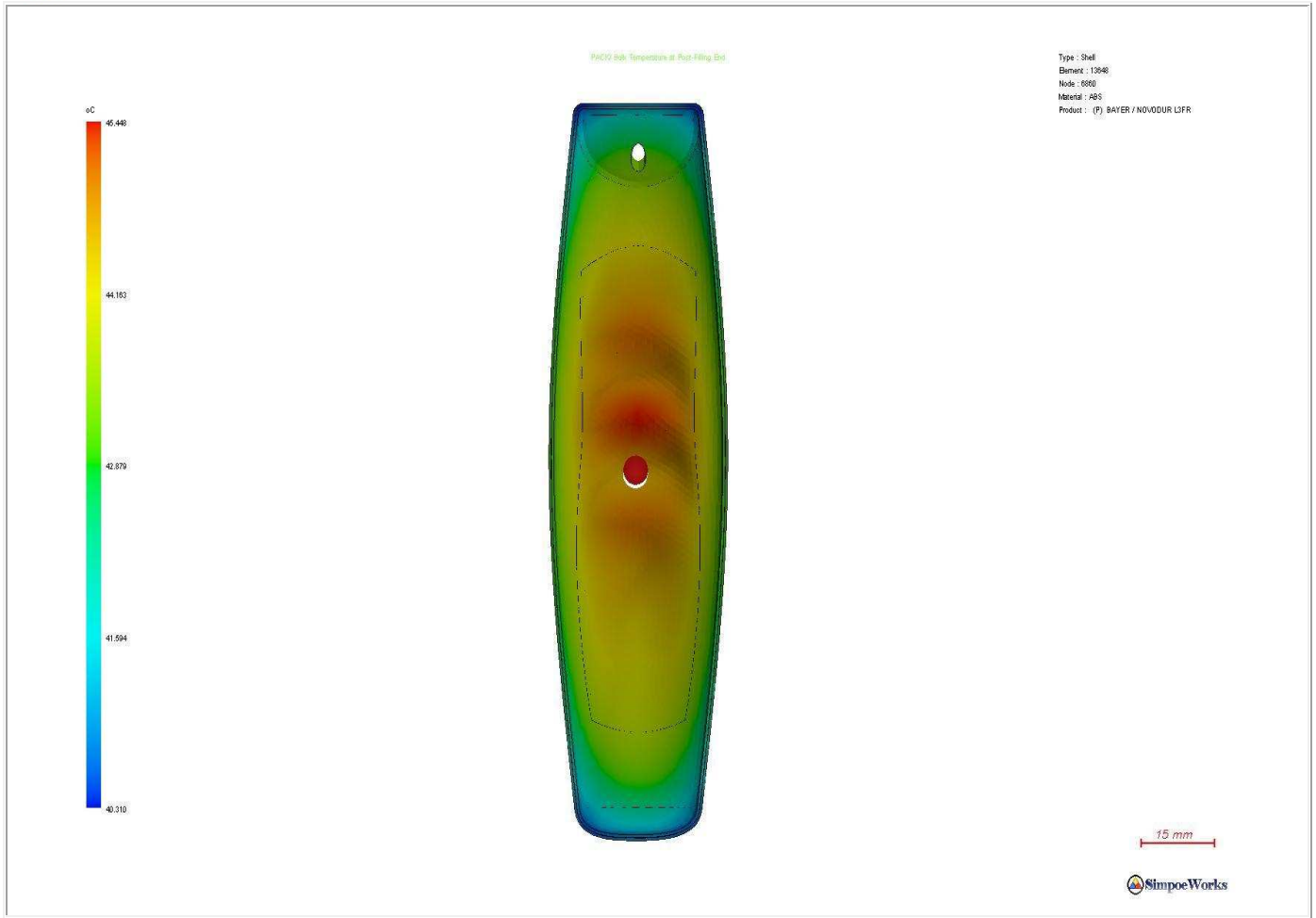


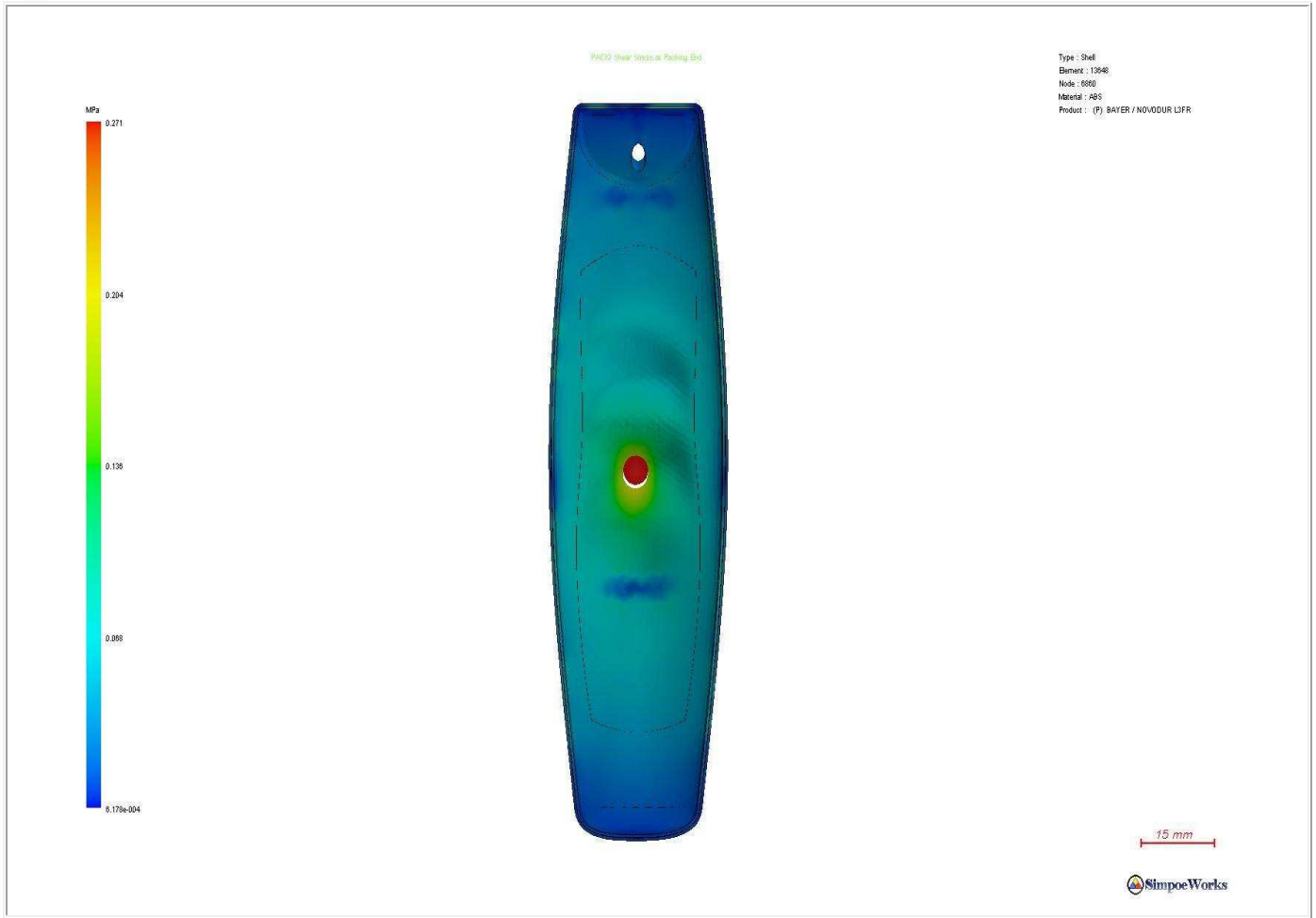
5.4 PACK (3D Model view)

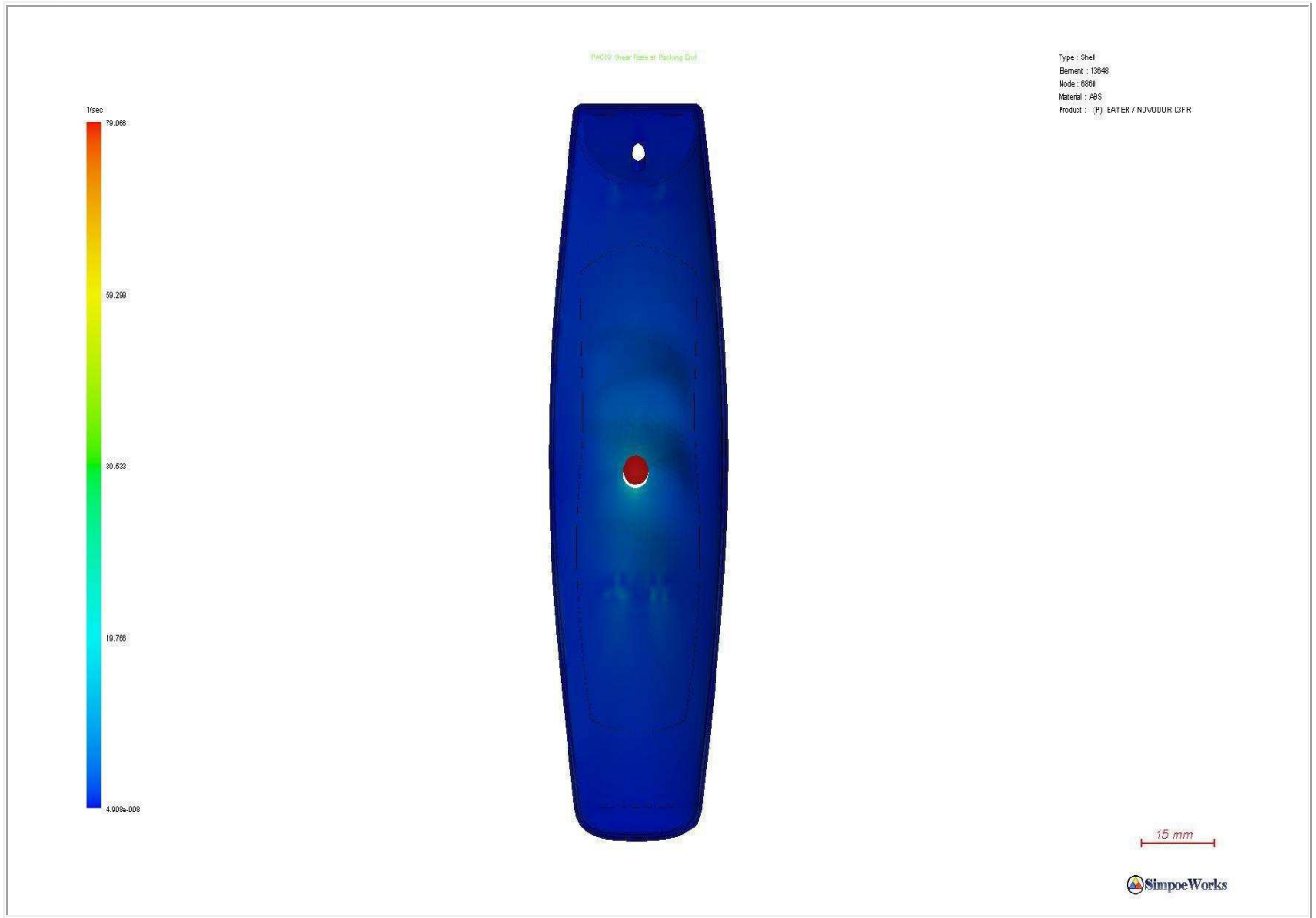












PACK Volume Strainage at Parking End

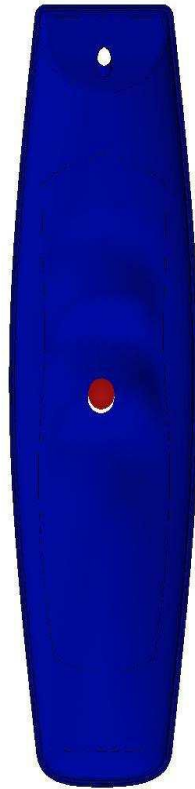
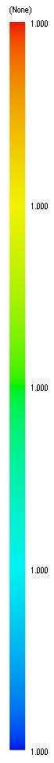
Type : Shell
Element : 13648
Node : 890
Material : ABS
Product : (P) BAYER / NOVODUR LFR



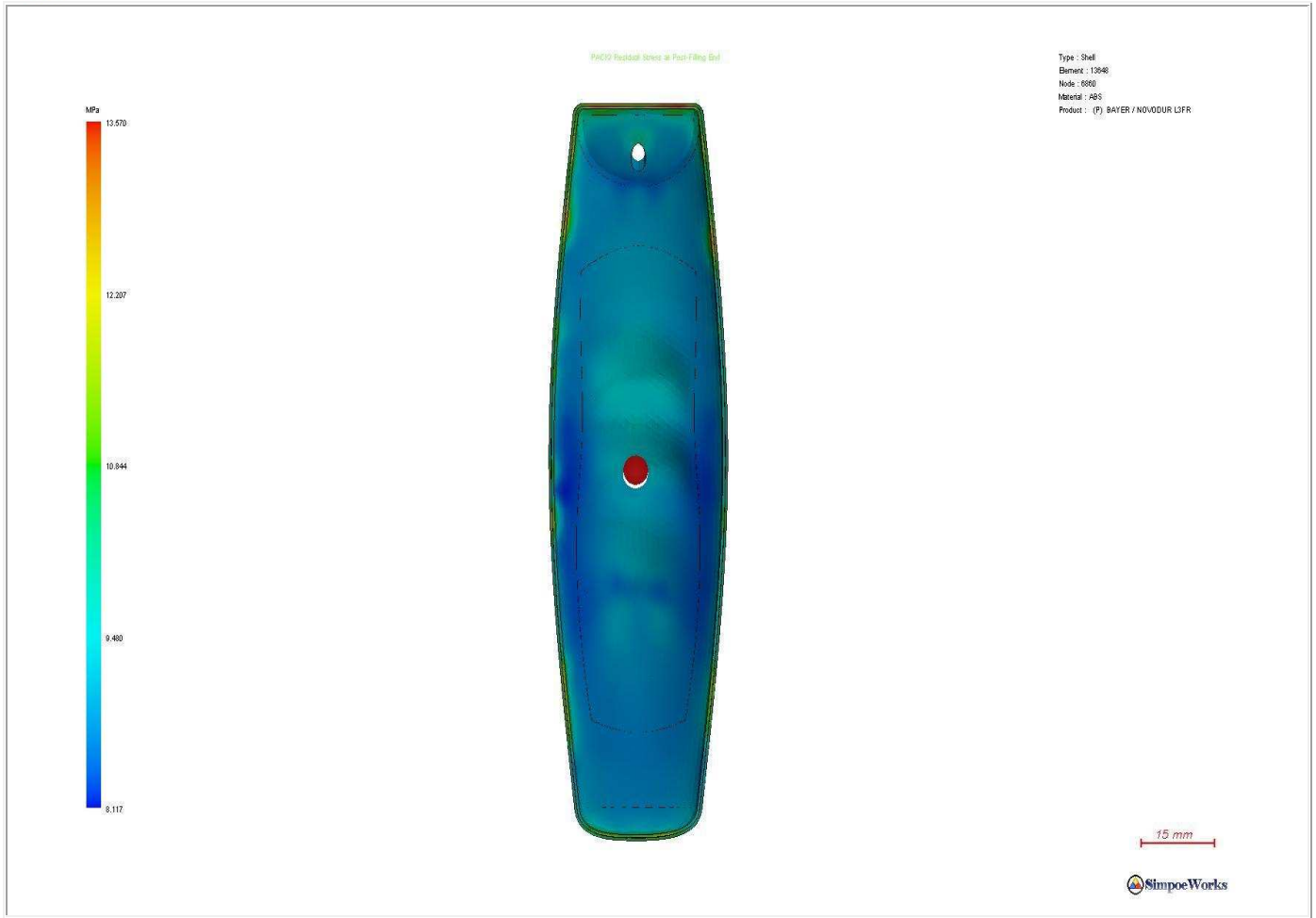
15 mm

Pressure (kPa) - Max

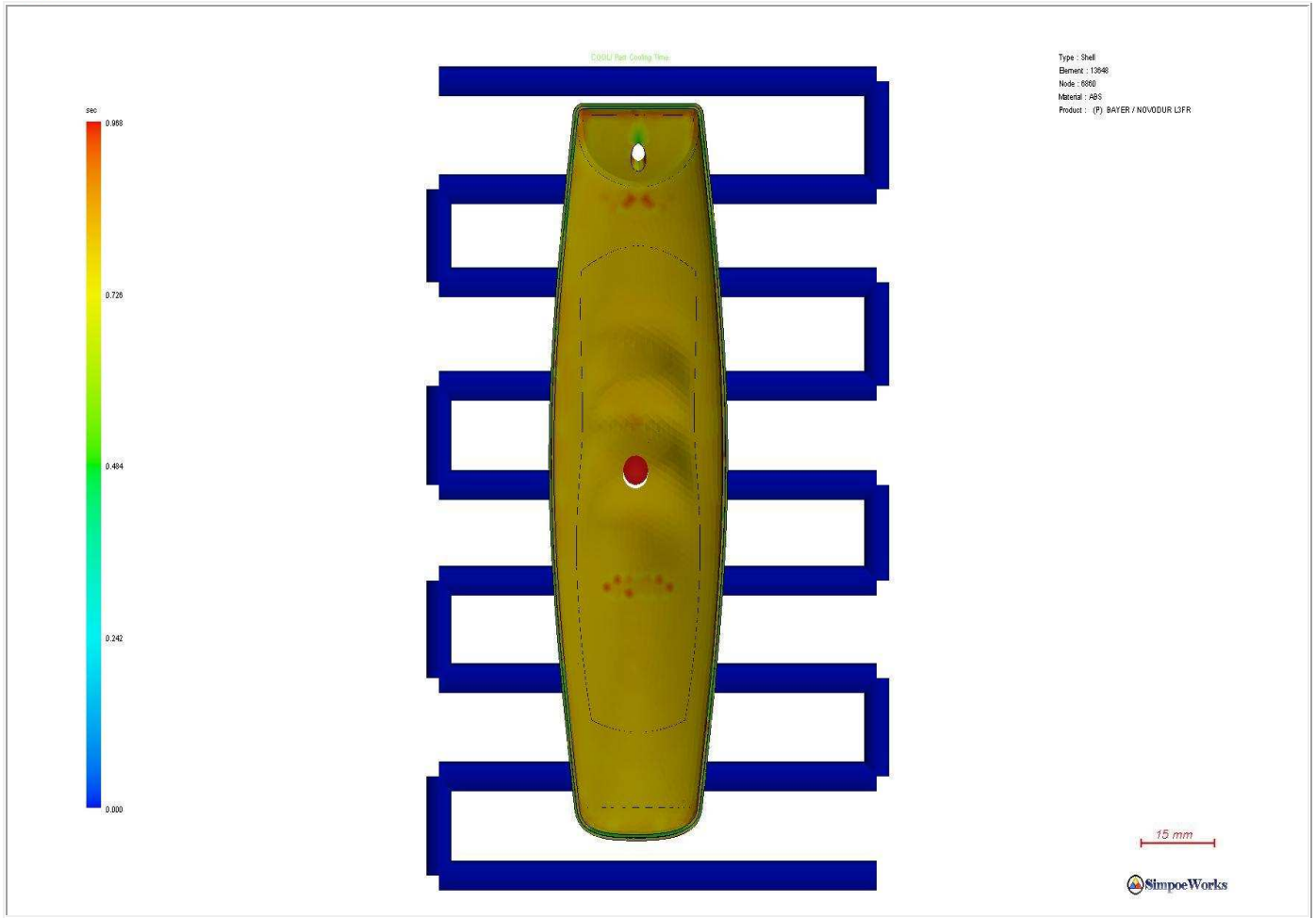
Type: Shell
Element: 13048
Node: 8900
Material: ABS
Product: (P) BAYER / NOVODUR LFR

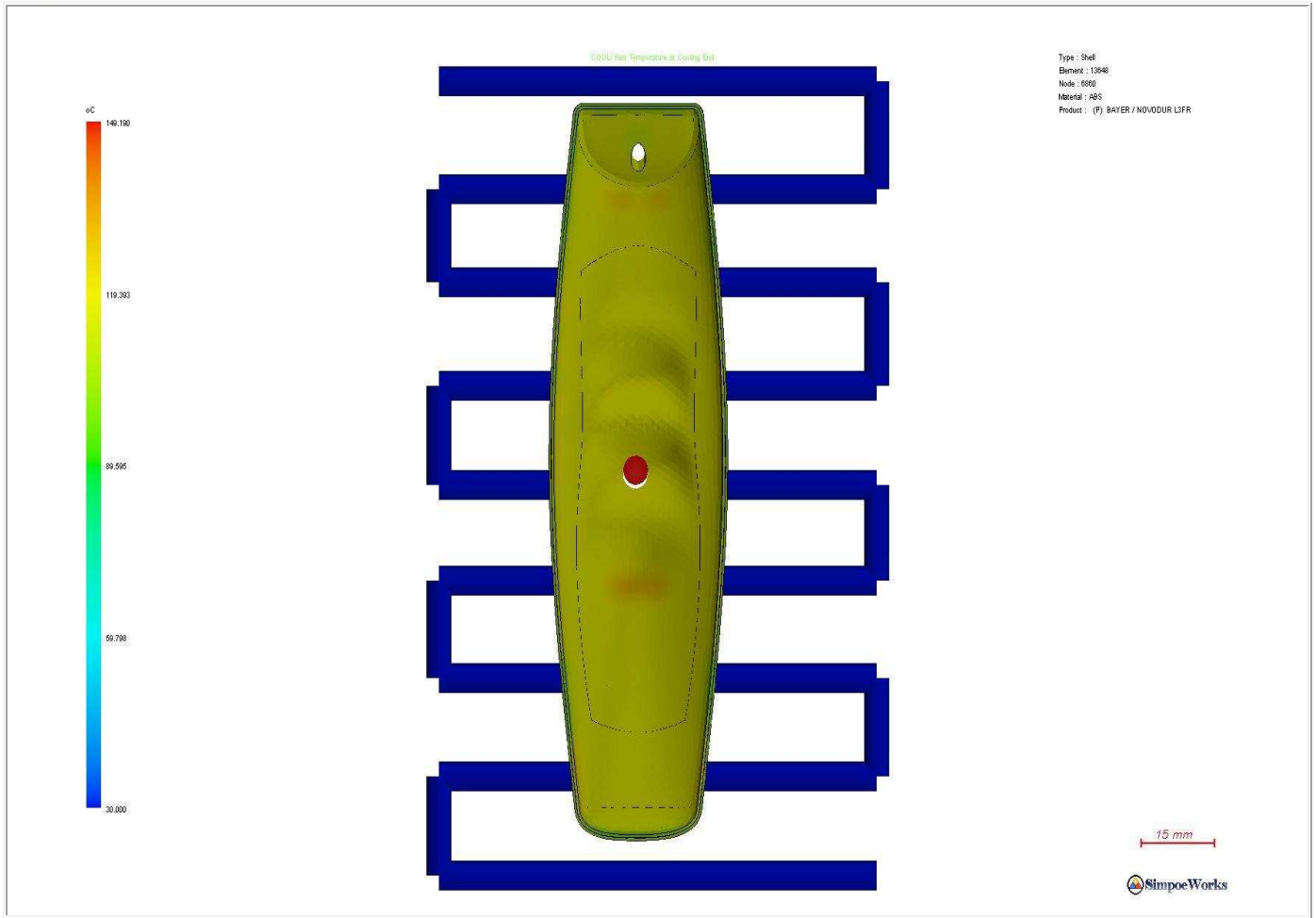


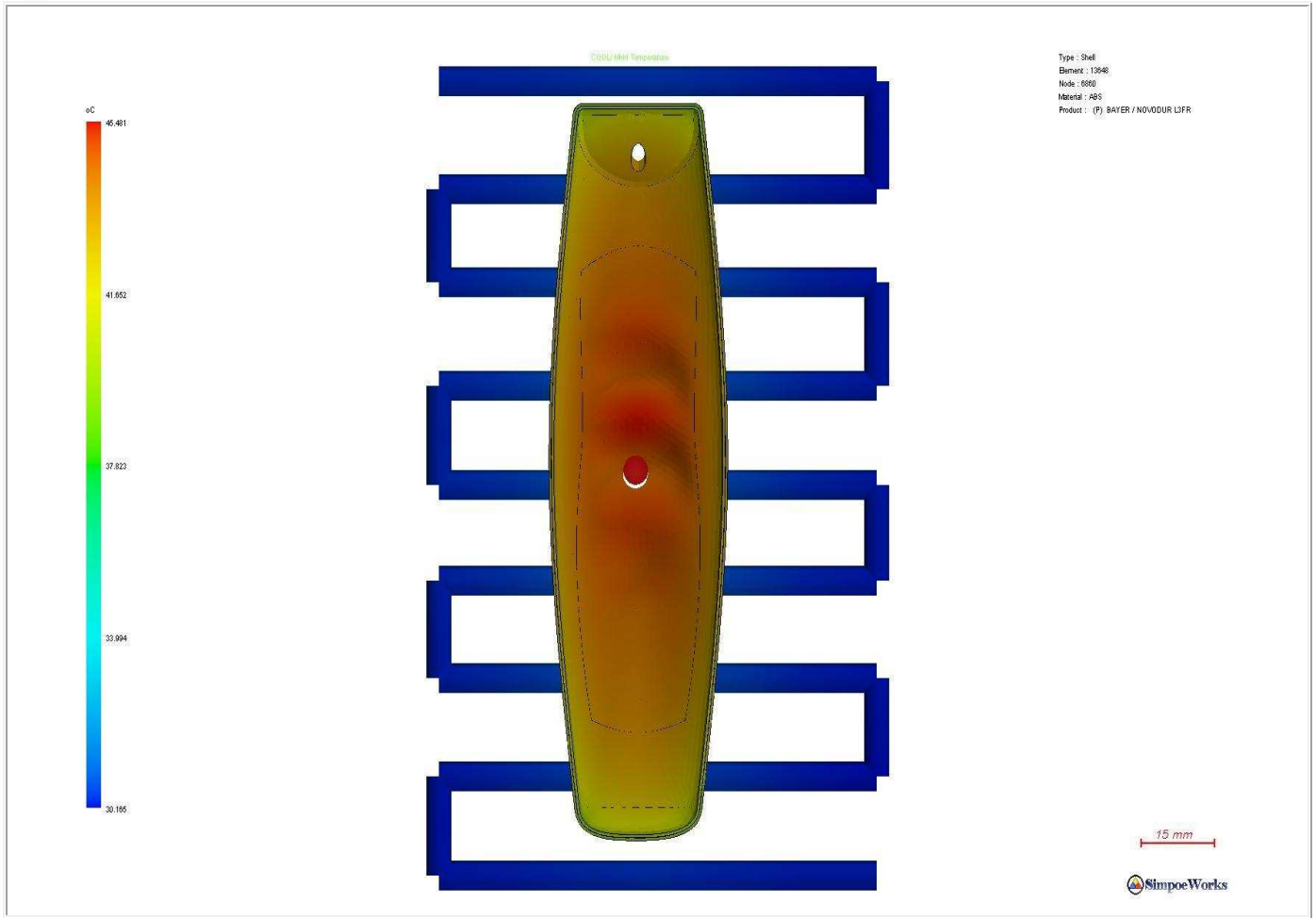
15 mm

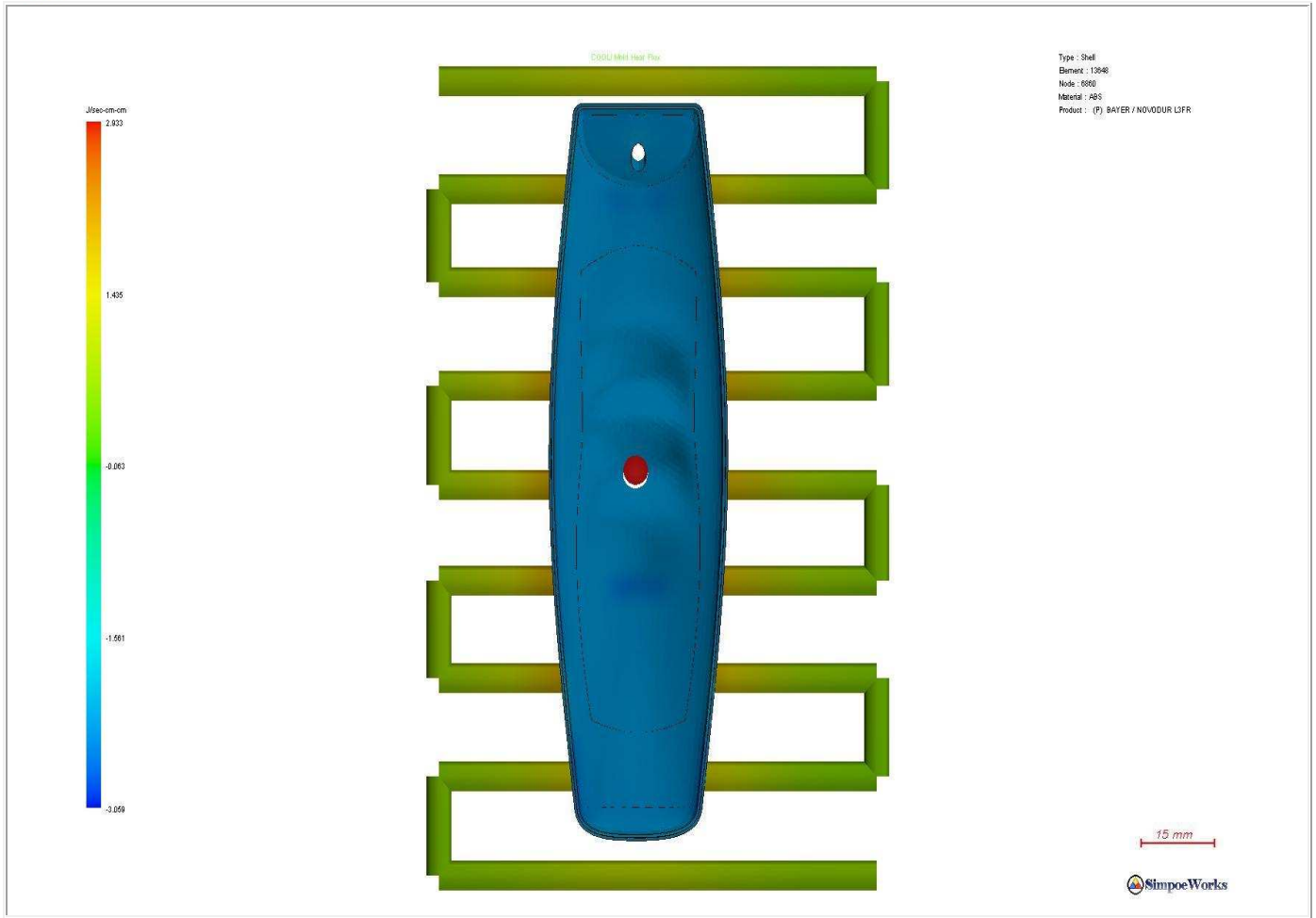


5.5 COOL (3D Model view)









5.6 WARP (3D Model view)

