

# Binary Phase Envelope

Spoken Tutorial Project  
<http://spoken-tutorial.org>

National Mission on Education through ICT  
<http://sakshat.ac.in>

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# Learning Objectives

In this tutorial, we will learn to generate:



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- **Txy plot** at given pressure



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- **xy plot** for the obtained **Txy** data



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- **Txy plot** at given pressure
- **xy plot** for the obtained **Txy** data
- **Pxy plot** at given temperature



# System Requirement



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- DWSIM v 5.2 (Classic UI)



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- DWSIM v 5.2 (Classic UI)
- Windows 10
- Any OS: Linux, Mac OS X or FOSSEE OS on ARM



# Prerequisites

To practice this tutorial, you should know to



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To practice this tutorial, you should know to

- Add components to a **flowsheet**



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To practice this tutorial, you should know to

- Add components to a **flowsheet**
- Select **thermodynamic** packages



# Prerequisites

To practice this tutorial, you should know to

- Add components to a **flowsheet**
- Select **thermodynamic** packages
- Add **material** streams and specify their properties



# Prerequisite Tutorials and Files

- <http://spoken-tutorial.org>
- You can access these tutorials and all the associated files from this site



# Inlet stream conditions and Property Package

<b>Streams</b>	<b>Ethanol, 1-propanol</b>	
<b>Mole Fraction</b>	$x_{\text{C}_2\text{H}_5\text{OH}} = 0.5$	$x_{\text{C}_3\text{H}_8\text{O}} = 0.5$
<b>Temperature</b>	<b>32 °C</b>	
<b>Pressure</b>	<b>3.5 bar</b>	
<b>Mass Flow</b>	<b>120 kmol/h</b>	
<b>Package</b>	<b>Soave-Redlich-Kwong</b>	

# Summary

In this tutorial, we have learnt to generate:

- Txy plot at given pressure
- xy plot for the obtained Txy data
- Pxy plot at given temperature





# Assignment

- Generate  $(P)_{xy}$  plot for the  $P_{xy}$  data obtained
- Generate the  $(P)_{xy}$  plot using NRTL model
- Compare the results



# About the Spoken Tutorial Project

- Watch the video available at [http://spoken-tutorial.org/What\\_is\\_a\\_Spoken\\_Tutorial](http://spoken-tutorial.org/What_is_a_Spoken_Tutorial)
- It summarises the Spoken Tutorial project



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- It summarises the Spoken Tutorial project
- If you do not have good bandwidth, you can download and watch it



# Spoken Tutorial Workshops

## The Spoken Tutorial Project Team,

- Conducts workshops using spoken tutorials
- Gives certificates to those who pass an online test
- For more details, please write to [contact@spoken-tutorial.org](mailto:contact@spoken-tutorial.org)



# Forum for specific questions

- Do you have questions in this Spoken Tutorial?
- Please visit <http://forums.spoken-tutorial.org>
- Choose the minute and second where you have the question
- Explain your question briefly
- Someone from the FOSSEE team will answer them



# DWSIM Flowsheeting Project

- The FOSSEE team coordinates conversion of existing flow sheets
- We give honorarium and certificates for those who do this
- For more details, please visit this site  
<http://dwsim.fossee.in/flowsheeting-project>



# Textbook Companion Project

- The FOSSEE team coordinates coding of solved examples of popular books
- We give honorarium and certificates for those who do this
- For more details, please visit this site  
<http://dwsim.fossee.in/textbook-companion-project>



# Lab Migration Project

- The FOSSEE team helps migrate commercial simulator labs to DWSIM
- We give honorarium and certificates for those who do this
- For more details, please visit this site  
<http://dwsim.fossee.in/lab-migration-project>





# Acknowledgements

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# Thanks

- Thanks for joining

