

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:



Learning Objectives

In this tutorial, we will learn to generate:

- **Txy plot** at given pressure



Learning Objectives

In this tutorial, we will learn to generate:

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



Learning Objectives

In this tutorial, we will learn to generate:

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



System Requirement



System Requirement

- **DWSIM v 5.2 (Classic UI)**



System Requirement

- DWSIM v 5.2 (Classic UI)
- Windows 10



System Requirement

- 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



Prerequisites

To practice this tutorial, you should know to

- Add components to a **flowsheet**



Prerequisites

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

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



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
- It summarises the Spoken Tutorial project



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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



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>



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Thanks

- Thanks for joining

