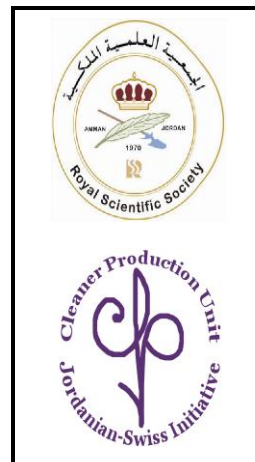


# Cleaner Production in Jordan

## Fact sheet: Jordan Sipes Paints Co. Ltd



### What is Cleaner Production?

Cleaner Production (CP) is the continuous application of an integrated, preventive strategy to processes, products and services to increase efficiency and reduce risks to humans and the environment.

In this fact-sheet the results achieved from the CP In-plant Assessment in Jordan Sipes Paints Co. Ltd. are summarized. The information shall serve to demonstrate how CP can be implemented in industries in Jordan.

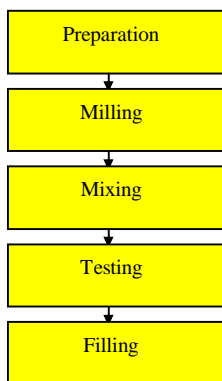
### General Information



Mixing of raw materials

<b>Company</b>	Jordan Sipes Paints Co. Ltd., Amman, Jordan.
<b>Sector</b>	Paints Manufacturing.
<b>Products</b>	Decorative, industrial, automotive and marine paints.
<b>Market</b>	75% national market, 25% export to Saudi Arabia, National Palestinian Authority and United Arab of Emirates.
<b>Employees</b>	100 (80 production and 20 administration).
<b>Management Systems</b>	The company has a certification in ISO 9000 since 2002 and Quality Mark for many products.

### Production



Process Flow Diagram

<b>Processes</b>	The major steps for the production of the emulsion and oil-based paints are comprised of: preparation of raw materials, mixing, dispersing, grinding, testing and filling of the product.
<b>Raw Materials</b>	The major raw materials used are solvents (water and chemicals), pigments, powder, binder, resin and additives.
<b>Energy Sources</b>	The main source of the energy is the electricity where the company consumed 478,440 KWh in 2003.
<b>Wastes and Emissions</b>	Waste solvents and wastewater resulting from the cleaning of mixers and containers are the main wastes generated from the company in addition to the dust and solvent emissions.

### CP program

The CP program comprised capacity building and in-plant application in a modular form in addition to experts mission. A joint team from RSS CP Unit and the Company worked cooperatively to implement CP assessment for the company.

The work included detailed company visits, identifying and evaluating CP options, implementing a number of options and setting an action plan for the follow up of CP at the company.

### Company Statement

Our participation in the CP assessment project enabled us to have the satisfaction of activity helping to protect our environment, while cutting costs and optimize our process at the same time.

Eng. Samir Bdeir, Deputy General Manager

## Results

Through the cleaner production assessment carried out by a team of RSS CP unit and the company, 23 CP options were identified to be feasible for the company. The four most important options are described below.

Option	Environmental benefits	Economic savings		
		Savings [JD/yr]	Investment [JD]	Pay-back
<b>Option 1 - Adding ammonia</b> By adding ammonia after the dispersing step and not in the first step, the viscosity of the solution will be reduced and this will reduce the energy consumption.	18,000 KWh / yr	700	No investment	-
<b>Option 2 - Install pressure safety valve</b> The installation of pressure safety valve between mixing tank and xylene storage tank will reduce solvent losses.	3480 liters of solvent / yr	870	440	0.5 yr
<b>Option 3 – Install timer</b> The option of installing timer to switch off the mixer while waiting samples results from the QC labs will save energy.	31200 KWh / yr (for one mixer)	1210 (One mixer)	60 (One mixer)	0.6 month
<b>Option 4 - Install distillation unit</b> Installation of distillation unit will recover the waste solvents generated from the company to be reused again.	7900 liters of solvents / yr	3860	31000	8 yr

## Contacts & Partners



Royal Scientific Society, Environmental Research Centre (ERC),  
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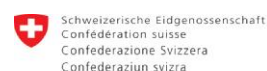


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