HOW CHEP CAN HELP REDUCE YOUR COMPANY'S CARBON FOOTPRINT

SOS-LOGistica

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Genoa, 30th November 2007

CHEP ENVIRONMENTAL CHARTER
REDUCING WASTE & PROTECTING THE ENVIRONMENT

HANDLING THE WORLD'S MOST IMPORTANT PRODUCTS. everyday.

Kyoto 京都市

Global Warming

Climate Change

Directive 94/12/EC

- » Prevention of Packaging
- » Reuse of Packaging
- » Recovery of Packaging
- » Recycling of Packaging Waste
- » Recovery for Energy

CHEP ENVIRONMENTAL CALCULATOR
A MODEL TO MEASURE CHEP BENEFITS

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To help the industry & retail to reduce its carbon footprint, CHEP developed an Environmental Benefits Calculator which measures, over a 10 year period, the environmental benefits achievable using CHEP vs. White Exchange and/or Disposable – One-Way pallets.

1. *The Operational & Pooling Efficiencies of the CHEP palletpool*
2. *Responsible use and conservation of Natural Resources (timber) during the entire pallet life-cycle (production and repair)*
3. *Carbon Sink effect and Oxygen production from trees that will not be cut when Manufacturers decide to adopt the CHEP solution*
4. *CO2 emissions generated by transport of pallets during their entire life-cycle (issue to Manufacturers, transport under load, collection from Distributors, repair, reissue, and disposal / recycling of scrap)*

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CHEP ENVIRONMENTAL CALCULATOR
VALIDATION & ENDORSEMENT - LEEDS UNIVERSITY

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"After an appropriate period of model analysis and subsequent model defense by CHEP the University of Leeds considers that, notwithstanding the accuracy of Customer input data, the claims made by the model are conservative and adequately prove that environmental savings and benefits are made by switching to the use of CHEP pallets."

Dr. Darron Dixon Hardy – Leeds, 23.09.2007

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CHEP ENVIRONMENTAL CALCULATOR
STANDARD 'QUICK REFERENCE GRID'

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ENVIRONMENTAL SAVINGS with CHEP vs. WHITE RETURNABLE and ONE-WAY PALLETS (as per below operational assumptions)

Assumptions	1000 x 1200 mm Ind Pallet	800 x 1200 mm Euro Pallet	600 x 800 Display Pallet
Cycles / Yr	5,1	5,9	7,8
Damage Rate / Cycle	10%	15%	12,5%
Losses Rate / Cyles	7%	10%	5%
% Own Transport Fleet	40%	40%	40%

ENVIRONMENTAL BENEFITS when using CHEP pallets vs. WHITE RETURNABLE pallets over a period of 10 Years — versus WHITE RETURNABLE

	1000 x 1200 mm Ind Pallet			800 x 1200 mm Euro Pallet			600 x 800 Display Pallet			Total ALL Pallets		
Pallet Movements	TREES	hectare forest	tonne CO_2	TREES	hectare forest	tonne CO_2	TREES	hectare forest	tonne CO_2	TREES	hectare forest	tonne CO_2
5.000	355	1,2	142	470	1,7	164	152	0,5	59	977	3,4	365
10.000	710	2,3	284	941	3,3	328	303	1,1	118	1.955	7	730
25.000	1.776	6	711	2.352	8	820	759	2,7	295	4.887	17	1.826
50.000	3.552	12	1.422	4.705	17	1.639	1.517	5	590	9.774	34	3.652
75.000	5.328	17	2.133	7.057	25	2.459	2.276	8	885	14.661	50	5.477
100.000	7.104	23	2.844	9.410	33	3.279	3.034	11	1.180	19.548	67	7.303
250.000	17.759	58	7.110	23.525	83	8.197	7.585	27	2.951	48.869	168	18.258
500.000	35.518	116	14.221	47.050	165	16.395	15.171	54	5.901	97.739	336	36.517
1.000.000	71.036	232	28.442	94.100	331	32.789	30.341	108	11.802	195.477	671	73.033

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Presentation prepared for SOS-LOGistica Conference Italia. Please contact CHEP before using any information.

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ENVIRONMENTAL SAVINGS with CHEP vs. ONE-WAY PALLETS (as per below operational assumptions)

Assumptions	1000 x 1200 mm Ind Pallet	800 x 1200 mm Euro Pallet	600 x 800 Display Pallet
Cycles / Yr	5,1	5,9	7,8
Damage Rate / Cycle	10%	15%	12,5%
Losses Rate / Cyles	7%	10%	5%
% Own Transport Fleet	40%	40%	40%

ENVIRONMENTAL BENEFITS of CHEP versus ONE-WAY DISPOSABLE pallets over a period of 10 Years

	1000 x 1200 mm Ind Pallet			800 x 1200 mm Euro Pallet			600 x 800 Display Pallet			versus ONE-WAY DISPOSABLE Total ALL Pallets		
Pallet Movements	TREES	hectare forest	tonne CO_2	TREES	hectare forest	tonne CO_2	TREES	hectare forest	tonne CO_2	TREES	hectare forest	tonne CO_2
5.000	3.633	13	1.031	3.224	11	909	1.477	5,3	420	8.334	29	2.361
10.000	7.265	26	2.063	6.449	23	1.818	2.954	11	841	16.669	59	4.722
25.000	18.164	64	5.157	16.122	56	4.546	7.386	26	2.101	41.672	147	11.804
50.000	36.327	128	10.315	32.244	113	9.092	14.772	53	4.203	83.344	294	23.609
75.000	54.491	192	15.472	48.366	169	13.638	22.158	79	6.304	125.016	441	35.413
100.000	72.655	257	20.629	64.489	225	18.183	29.544	106	8.405	166.688	588	47.218
250.000	181.637	641	51.573	161.222	564	45.459	73.861	264	21.013	416.719	1.469	118.044
500.000	363.274	1.283	103.146	322.443	1.127	90.917	147.722	528	42.026	833.439	2.938	236.089
1.000.000	726.548	2.566	206.292	644.886	2.254	181.835	295.444	1.055	84.052	1.666.878	5.875	472.178

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CHEP ENVIRONMENTAL CALCULATOR
INPUT SHEET FOR DETAILED ASSESSMENT

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DATA INPUT TEMPLATE -- PALLET ENVIRONMENTAL BENEFIT CALCULATOR

RED CELLS TO FILL IN

Cy Name	*ITALIA Market of Returnable Pallets*		Country	Italy			
Date	20 November 2007		Key Movement & Pallet Operating Assumptions				
CUSTOMER INPUT	Pallet Type	B1210A	100 x 120 Plt	B1208A	80 x 120 Plt	B0806A	60 x 80 Plt
	Number of Movements per annum		5.000.000		65.000.000		5.000.000
	% Annual Growth of Movements		4,0%		4,0%		8,0%
	% Pallet Loss per Movement		7,0%		10,0%		5,0%
	% Pallet Repair per Movement		10,00%		15,0%		12,5%
	Pallet Days of Stock at Manufacturer		40		35		25
	Pallet Days of Stock at Distribution		30		25		20
	Current Pallet Needs		986.301		11.041.096		643.836
	% Transport with Own Fleet		40,0%		40,0%		40,0%
	Avg. Distance (Km) from Market		236 km		236 km		236 km
	% of pallets exchanged at time of delivery		70%		70%		70%
	Avg. Distance (Km) from Pallet Manufacturer		45 km		45 km		45 km

The degree of accuracy of the Environmental results provided by this model is strictly dependant on the accuracy of the INPUT information provided by the Prospect / Customer in the above DATA INPUT TEMPLATE

BEST ESTIMATED DATA

ENVIRONMENTAL IMPACT RESULTS (1)
"TRANSPORT CO_2 EMISSION"

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RESULTS in Terms of Tonnes of CO2 emission over 10 Years				
	B1210A	B1208A	B0806A	All Pallets
CHEP OWT	996.634	10.117.439	393.845	11.507.918
WHITE EXCHANGE	1.184.864	12.042.400	467.929	13.695.193
DISPOSABLE	1.192.384	12.116.113	473.892	13.782.390
Delta WHITE EXCH - CHEP	188.230	1.924.962	74.084	2.187.275
Delta DISPOSABLES - CHEP	195.750	1.998.675	80.047	2.274.472

PROVISIONAL RESULTS

- ***CO_2 emissions generated by transport of the pallets during their entire life-cycle (issue to Manufacturers, transport under load, collection from Distributors, repair, reissue, and final disposal / recycling scrap)***

ENVIRONMENTAL IMPACT RESULTS (2)
"OTHER ENVIRONMENTAL BENEFITS"

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SUMMARY ENVIRONMENTAL IMPACT OF CHEP over the next 10 YEARS				
	ITALIA Market of Returnable Pallets	CHEP Pallets	WHITE Returnable	DISPOSABLE One-Way Plts
TIMBER NEEDS	HECTARES of FOREST to be cut over the next 10 years	8.415	27.691	48.737
	% versus ALTERNATIVES	100%	329%	579%
	# TREES needed over the next ten years	2.356.161	7.753.340	13.646.408
	% versus ALTERNATIVES	17%	57%	100%
USE of RECYCLED WOOD	USE OF M³ RECYCLED WOOD in production & repair of	380.389	350.883	0
	# TREES saved due to the use of recycled wood in CHEP	683.829	630.786	0
	% of TOTAL NEED for Pallet Timber	22,5%	7,5%	

		CHEP Pallets	WHITE Returnable	DISPOSABLE One-Way Plts
SAVINGS with CHEP	CHEP will save the following _ number of TREES from being cut		5.450.223	11.974.076
	CHEP will remove from the atmosphere the following Tonnes of CO_2 due to Carbon Sink effect and Transportation impact		3.625.207	5.433.590
	The Tonnes of CO_2 removed from the atmosphere by CHEP correspond to the Carbon Dioxide emissions of _ CARS		151.050	226.400
	The Tonnes of CO_2 removed from the atmosphere by CHEP correspond to the Carbon Dioxide emissions of _ PEOPLE		199.012	298.287
	Chosing CHEP will allow the non-cut trees to produce the following additional Tonnes of OXYGEN (O_2)		1.045.376	2.296.679
	Chosing CHEP will safeguard the following ... Hectares of FOREST		19.276	40.322

versus white exchange

380.389 M3 recycled

5.450.223 saved trees


151.050 cars


199.012 people


19.276 ha forest

PROVISIONAL RESULTS

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“Protecting the Environment together. Everyday”

Marc Michielsen
Director, Government & Regulatory Affairs
CHEP Europe