◆ INVENTORY MATRIX

Paper

	Material input	Energy use	Waste & emissions
Raw material extraction *log cutting*	*tree* *gasoline*	*electricity*	*air emission* *solid waste*
Material processing *pulp, cook, beat*	*water bleach gum* *sodium nydroxide* *sodium sulfide* *wool titanium oxide*	*electricity* *heat*	*air emission* *water waste* *water pollutant*
Component manufacturing *coat, print*	*chemicals* *pigments* *ink*	*electricity*	*air emission* *water pollutant*
Assembly&packaging		*electricity*	*air emission* *solid waste(paper off-cuts)*
Distribution&purchase	*disel*	*electricity*	*air emission*
Installation&use		*electricity*	
Maintenance&upgrade		*water*	*water waste*
Cycle: reuse (product/component)		*water*	*water waste*
Cycle: recycling (materials)			
Cycle: disposal (incineration/landfill)	*disel*	*heat*	*air emission* *water pollutant* *solid waste*

◆ IMPACT MATRIX

Paper

◆ Negative impact
◆ No impact
◆ Positive impact

	Resource Depletion	Global Warming	Ozone layer depletion	Acid rain/ acidification	Solid waste	Land degradation	Water pollution	Air pollution	Reduced biodiversity	Employment creation
Raw material extraction *log cutting*	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Material processing *pulp, cook, beat*	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Component manufacturing *coat, print*	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Assembly &packaging	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Distribution &purchase	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Installation&use	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Maintenance &upgrade	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Cycle: reuse (product/ component)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Cycle: recycling (materials)										◆
Cycle: disposal (incineration/ landfill)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆

◆ INVENTORY MATRIX

Cotton

	Material input	Energy use	Waste & emissions
Raw material extraction *cultivate, harvest*	*pesticide* *disel* *seed* *water*	*man power* *electricity*	*air emission* *solid waste* *water waste* *water pollutant*
Material processing *clean,dry*	*chemicals* *water*	*electricity*	*air emission* *solid waste* *water waste* *water pollutant*
Component manufacturing *spin, weave, sew*		*electricity*	*air emission* *solid waste*
Assembly&packaging	*polyethylene*	*electricity*	*air emission*
Distribution&purchase	*disel* *gasoline*	*electricity*	*air emission*
Installation&use	*water*	*electricity*	*air emission* *water waste*
Maintenance&upgrade	*water* *detergent*	*electricity*	*water pollutant*
Cycle: reuse (product/component)	*water*	*electricity*	*air emission* *water waste*
Cycle: recycling (materials)	*disel*	*electricity*	*air emission*
Cycle: disposal (incineration/landfill)	*disel*	*heat*	*air emission* *water pollutant* *solid waste*

◆ IMPACT MATRIX

Cotton

◆ Negative impact
◆ No impact
◆ Positive impact

	Resource Depletion	Global Warming	Ozone layer depletion	Acid rain/ acidification	Solid waste	Land degradation	Water pollution	Air pollution	Reduced biodiversity	Employment creation
Raw material extraction *cultivate, harvest*	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Material processing *clean,dry*	◆	◆		◆	◆	◆	◆	◆	◆	◆
Component manufacturing *spin, weave, sew*	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Assembly &packaging	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Distribution &purchase	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Installation&use	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Maintenance &upgrade	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Cycle: reuse (product/ component)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Cycle: recycling (materials)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Cycle: disposal (incineration/ landfill)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆

◆ INVENTORY MATRIX

Polyethylene

	Material input	Energy use	Waste & emissions
Raw material extraction	*drill*	*power* *electricity*	*air emission* *water pollutant*
Material processing *crude extrusion*	*mold*	*electricity*	*petrolum* *paraffin wax* *asphalt* *air emission*
Component manufacturing *polymerisation reaction*	*hydro carbons* *ethyl benzene*	*electricity*	*dirty oil* *water waste* *air emission*
Assembly&packaging		*electricity*	*air emission*
Distribution&purchase	*disel* *gasoline*	*electricity*	*air emission*
Installation&use	*water*	*electricity*	*air emission* *water waste*
Maintenance&upgrade	*water*	*electricity*	*water waste* *water pollutant*
Cycle: reuse (product/component)	*water*	*electricity*	*water waste* *water pollutant*
Cycle: recycling (materials)			
Cycle: disposal (incineration/landfill)	*disel*	*heat*	*air emission* *water pollutant* *solid waste*

◆ IMPACT MATRIX

Polyethylene

◆ Negative impact
◆ No impact
◆ Positive impact

	Resource Depletion	Global Warming	Ozone layer depletion	Acid rain/ acidification	Solid waste	Land degradation	Water pollution	Air pollution	Reduced biodiversity	Employment creation
Raw material extraction	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Material processing *crude extrusion*	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Component manufacturing *polymerisation reaction*	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Assembly &packaging	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Distribution &purchase	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Installation&use	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Maintenance &upgrade	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Cycle: reuse (product/ component)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Cycle: recycling (materials)										◆
Cycle: disposal (incineration/ landfill)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆

◆ INVENTORY MATRIX

Spring Steel

	Material input	Energy use	Waste & emissions
Raw material extraction	*iron* *carbon* *water*	*electricity*	*air emission*
Material processing *alloy, coiling,*	*limstone steel balls* *shaft* *addhesive*	*electricity*	*air emission* *water waste*
Component manufacturing *harden, grind,set,coat*	*compressor water* *accelerant liquid* *metallic powder*	*electricity*	*air emission* *water waste* *water pollutant*
Assembly&packaging	*plastic*	*electricity*	*air emission*
Distribution&purchase	*disel*		*air emission* *water pollutant*
Installation&use		*electricity*	*air emission*
Maintenance&upgrade			
Cycle: reuse (product/component)	*water*		*water waste*
Cycle: recycling (materials)	*magnets*	*electricity*	*air emission*
Cycle: disposal (incineration/landfill)	*disel*	*heat*	*air emission* *water pollutant*

◆ IMPACT MATRIX

Spring Steel

◆ Negative impact
◆ No impact
◆ Positive impact

	Resource Depletion	Global Warming	Ozone layer depletion	Acid rain/ acidification	Solid waste	Land degradation	Water pollution	Air pollution	Reduced biodiversity	Employment creation
Raw material extraction	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Material processing *alloy, coiling,*	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Component manufacturing *harden, grind,set,coat*	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Assembly &packaging	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Distribution &purchase	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Installation&use	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Maintenance &upgrade										◆
Cycle: reuse (product/ component)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Cycle: recycling (materials)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Cycle: disposal (incineration/ landfill)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆

◆ INVENTORY MATRIX

Witch Hazel Foam

	Material input	Energy use	Waste & emissions
Raw material extraction *grow shrub, collect*	*seed* *water* *fertilizer* *pesticide*	*man power* *electricity*	*water waste* *water pollutant* *air emission*
Material processing *clean, boil*	*water* *bio-chemicals* *gasoline*	*electricity*	*air emission* *solid waste*
Component manufacturing *combine with alcohol* *add chemicals*	*alcohol* *sodium citrate* *machine* *benzoic acid* *glycerin* *sodium tocopherol*	*electricity*	*chemicals* *water pollutant* *air emission*
Assembly&packaging	*water* *plastic*	*electricity*	*air emission* *water waste*
Distribution&purchase	*disel*	*electricity*	*air emission* *water pollutant*
Installation&use	*water*	*electricity*	*water waste*
Maintenance&upgrade			
Cycle: reuse (product/component)			
Cycle: recycling (materials)		*electricity*	*air emission*
Cycle: disposal (incineration/landfill)	*disel*	*heat*	*air emission* *water pollutant*

◆ IMPACT MATRIX

Witch Hazel Foam

◆ Negative impact
◆ No impact
◆ Positive impact

	Resource Depletion	Global Warming	Ozone layer depletion	Acid rain/ acidification	Solid waste	Land degradation	Water pollution	Air pollution	Reduced biodiversity	Employment creation
Raw material extraction *grow shrub, collect*	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Material processing *clean, boil*	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Component manufacturing *combine with alcohol* *add chemicals*	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Assembly &packaging	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Distribution &purchase	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Installation&use	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Maintenance &upgrade	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Cycle: reuse (product/ component)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Cycle: recycling (materials)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Cycle: disposal (incineration/ landfill)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆