



thinkstep
GaBi

Product Sustainability
Performance



Changelog

GaBi Service Pack
Upgrade 28 to 29

January 2016



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Introduction

GaBi Service Packs comprise a collection of updates, enhancements or fixes to the following GaBi objects: flows, quantities, units, contacts, interpretations and references/citations. This document provides detailed information on what will be changed/added/deleted with the installation of the Service Packs.

If you need further information or if special questions should arise which have not been adequately described in this document, please feel free to send an e-mail to support@gabi-software.com.

1. Changed characterization factors

In the quantity “Human toxicity midpoint, non-cancer effects (v1.06)” some flows were not correctly implemented. This was corrected with SP29. In addition characterizations of some water flows were corrected as shown in the following table.

Flow	Folder	Quantity	Service pack 28 factor	Service pack 29 factor
Water, turbine use, unspecified natural origin	Water	Resource depletion water, midpoint (v1.06)	0.162	0
Water, lake	Water	Resource depletion water, midpoint (v1.06)	97	0.162
Water, well, in ground	Water	Resource depletion water, midpoint (v1.06)	97	0.162
Water, unspecified natural origin	Water	Resource depletion water, midpoint (v1.06)	97	0.162
Water, river	Water	Resource depletion water, midpoint (v1.06)	97	0.162
Water, cooling, unspecified natural origin	Water	Resource depletion water, midpoint (v1.06)	97	0.162
Water	ecoinvent long-term to fresh water	Total freshwater consumption (including rainwater)	-	-0.001
Water	Other emissions to fresh water	Total freshwater consumption (including rainwater)	-	-0.001
Water	ecoinvent long-term to fresh water	Blue water consumption	-	-0.001
Water	Other emissions to fresh water	Blue water consumption	-	-0.001

2. Renaming of flows

We found some inconsistent naming which were corrected.

Renamed flows

Service pack 28	Service pack 29
Carbon dioxide filter dust (ELCD)	Carbon dioxide filter dust
Ferrous sulfate (dissolved)	Ferrous sulphate (dissolved)
Hydrogen bromine (hydrobromic acid)	Hydrogen bromide (hydrobromic acid)
Methylformat	Methyl formate
Natrium oxide	Sodium oxide
Stainless Steel Hot Rolled Sheet (ELCD)	Stainless Steel Hot Rolled Sheet
Steel Hot Rolled (Section) (ELCD)	Steel Hot Rolled (Section)
Steel Rebar (ELCD)	Steel Rebar
Transport (ELCD)	Transport

Duplicate blanks were removed in the following flow names

Service pack 28	Service pack 29
Copper - Molybdenum - Gold - Silver - ore (1,13% Cu; 0,02% Mo; 0,01 g/t Au; 2,86 g/t Ag)	Copper - Molybdenum - Gold - Silver - ore (1,13% Cu; 0,02% Mo; 0,01 g/t Au; 2,86 g/t Ag)
Decorative fitting - stainless steel with electrical access control	Decorative fitting - stainless steel with electrical access control
Industrial road	Industrial road
Oil Palm FFB (40% H2O content, 30% C)	Oil Palm FFB (40% H2O content, 30% C)
OSB (Oriented Strand Board)	OSB (Oriented Strand Board)
Palladium (Pd 234m)	Palladium (Pd 234m)
Palladium (Pd 234m)	Palladium (Pd 234m)
Polymethylmethacrylate-sheet (PMMA)	Polymethylmethacrylate-sheet (PMMA)
R 115 (chloropentafluoroethane)	R 115 (chloropentafluoroethane)
Raw phosphate(30% P2O5)	Raw phosphate (30% P2O5)
Raw phosphate(31.9% P2O5)	Raw phosphate (31.9% P2O5)
Raw phosphate(32% P2O5)	Raw phosphate (32% P2O5)

Thermistor PTC THT Switch, Leaded Disk (420mg) D6x13	Thermistor PTC THT Switch, Leaded Disk (420mg) D6x13
Thermistor SMD PTC (400mg) 6.3x8x3.3	Thermistor SMD PTC (400mg) 6.3x8x3.3
Use of non renewable secondary fuels (NRSF)	Use of non renewable secondary fuels (NRSF)
Zinc - Copper - Lead - Ore (2.11% Zn 0.51% Cu 0.86% Pb)	Zinc - Copper - Lead - Ore (2.11% Zn 0.51% Cu 0.86% Pb)
Zinc - Copper - Lead - Ore (4% Zn 0.09% Cu 0.65% Pb)	Zinc - Copper - Lead - Ore (4% Zn 0.09% Cu 0.65% Pb)
Zinc - Copper - Lead - Ore (5.37% Zn 0.22% Cu 0.2% Pb)	Zinc - Copper - Lead - Ore (5.37% Zn 0.22% Cu 0.2% Pb)
Zinc - Copper - Lead - Ore (6.95% Zn 0.13% Cu 2.04% Pb)	Zinc - Copper - Lead - Ore (6.95% Zn 0.13% Cu 2.04% Pb)

3. Combined flows

We combined a couple of flows to get rid of doublets:

Service pack 28 flow	Folder	Action	Service pack 29 flow	Folder
Non-Iron-Fraction(ELCD)	Waste for recovery	Combined to	Non-ferrous fraction	Waste for recovery
Non-ferrous fraction	Waste for recovery			
Radon (Rn222)	ecoinvent long-term to air	Combined to	Radon-222	ecoinvent long-term to air
Radon-222	ecoinvent long-term to air			
Nitrogen, organic bound	ecoinvent long-term to fresh water	Combined to	Nitrogen organic bounded	ecoinvent long-term to fresh water
Nitrogen organic bounded	ecoinvent long-term to fresh water			
Metals (unspecified)	Inorganic emissions to fresh water	Combined to	Metals (unspecified)	Particles to fresh water
Metals (unspecified)	Particles to fresh water			
Hydrogen sulfide	Inorganic emissions to fresh water	Combined to	Hydrogen sulphide	Inorganic emissions to fresh water
Hydrogen sulphide	Inorganic emissions to fresh water			
Bromide (ecoinvent flow)	Inorganic emissions to fresh water	Combined to	Bromide	Inorganic emissions to fresh water
Bromide	Inorganic emissions to fresh water			

Chlorfenvinfos (ecoinvent flow)	Pesticides to agricultural soil	Combined to	Chlorfenvinfos	Pesticides to agricultural soil
Chlorfenvinfos	Pesticides to agricultural soil			

4. New elementary flows

Flow	Folder
Aniline, N,N-dimethyl-	Group NMVOC to air
C12-14 fatty alcohol	Group NMVOC to air
Fatty methylester	Group NMVOC to air
Maleic anhydride	Group NMVOC to air
Oil Mist	Group NMVOC to air
Tributylphosphorotrithioate	Group NMVOC to air
Fluorene	Halogenated organic emissions to fresh water
Methane, trichlorofluoro-, CFC-11	Halogenated organic emissions to fresh water
Aldehydes, unspecified	Hydrocarbons to fresh water
Fluorides	Inorganic emissions to air
Phosphine	Inorganic emissions to air
Fluosilicic acid	Inorganic emissions to fresh water
Gas, natural, in ground	Natural gas (resource)
Magnesium chloride	Non renewable resources
Clomazone	Pesticides to fresh water
Disulfoton	Pesticides to fresh water
Thiodicarb	Pesticides to fresh water
Clomazone	Pesticides to industrial soil

5. New valuable substance flows

Flow	Folder
Ammonium phosphate (AP, 52% P2O5, 8.4% N)	Agro chemicals
Mullion-transom (aluminium)	Assemblies
Mullion-transom (steel)	Assemblies
Mullion-transom facade (aluminium)	Assemblies
Mullion-transom facade (steel)	Assemblies
Roller shutter	Assemblies
Sun protection metal blinds	Assemblies
Passenger car (1 piece)	Automotive assemblies
Truck (1 piece)	Automotive assemblies



Biogas from biomass for bioenergy	Biomass for energy use
Ethanol from corn	Biomass fuels
Ethanol from sugar beet	Biomass fuels
Ethanol from sugar cane	Biomass fuels
County road	Building industry
Insulation glass 3 panes	Building industry
Component (piece) - Isokorb	Components
Loudspeaker (dynamic, Nd magnet)	Components
Microphone (electret condenser SMD)	Components
Power (from process stages)	Electric power
Diaphragm compressor	Hydrogen filling station
Hydrogen compressor module	Hydrogen filling station
Building, administration type (1m ³ gross volume)	Infrastructure
Building, reinforced concrete frame construction (1 m ³ gross volume)	Infrastructure
Building, steel frame construction (1 m ³ gross volume)	Infrastructure
Combined heat and power plant (1 piece)	Infrastructure
Gas-fired power plant (1 piece)	Infrastructure
Hard coal power plant (1 piece)	Infrastructure
Infrastructure, generic (1 piece)	Infrastructure
Lignite power plant (1 piece)	Infrastructure
Metal-cutting machine (1 piece)	Infrastructure
Pipeline (diameter 350 - 500 mm)	Infrastructure
Pipeline (diameter 500 - 700 mm, 1 m length)	Infrastructure
Pipeline (diameter 700 - 1000 mm)	Infrastructure
Tallow fatty acid (C16-C18)	Intermediate products
Packaging bagged good	Materials
Chipboard Eurodekor - Egger	Materials from renewable raw materials
Chipboard Eurospan - Egger	Materials from renewable raw materials
Cotton fiber (ginned)	Materials from renewable raw materials
Heradesign acoustic board	Materials from renewable raw materials
Kronotherm flex	Materials from renewable raw materials
Kronotherm sound	Materials from renewable raw materials
Laminate flooring DPL - Egger	Materials from renewable raw materials
Laminate flooring DPR - Egger	Materials from renewable raw materials
Laminated veneer lumber (LVL)	Materials from renewable raw materials
Needle fleece (8% H2O content)	Materials from renewable raw materials
Palm kernel oil methylester (PKOME)	Materials from renewable raw materials
Palm kernel oil, refined	Materials from renewable raw materials
Particle board	Materials from renewable raw materials
Pressure laminate flex - Egger	Materials from renewable raw materials
Pressure laminate MED	Materials from renewable raw materials
Pressure laminate Micro - Egger	Materials from renewable raw materials

Refined coconut oil	Materials from renewable raw materials
Sun flower seeds	Materials from renewable raw materials
Tallow	Materials from renewable raw materials
Vegetation substrate for roof	Materials from renewable raw materials
Wood (abs. dry)	Materials from renewable raw materials
Woodchips (softwood)	Materials from renewable raw materials
Aluminium foil	Metals
Hot dip galvanized structural steel	Metals
Slab (from external supply)	Metals
steel scrap product	Metals
Backing brick	Minerals
Brick, filled	Minerals
Brick, unfilled	Minerals
Cement (CEM III 32.5)	Minerals
Ceramic facade panels excl. substructure Argeton	Minerals
Ceramic facade panels incl. substructure Argeton	Minerals
Clay roofing tile	Minerals
Mineral insulating board Multipor	Minerals
Refractory bricks	Minerals
Sand-lime brick Silka	Minerals
Substructure for ceramic facade panels Argeton	Minerals
Airport passenger	Non-material systems
Composite bridge	Non-material systems
Concrete bridge	Non-material systems
Federal road	Non-material systems
Freeway	Non-material systems
Land road	Non-material systems
Municipal road	Non-material systems
Railway	Non-material systems
Road (average)	Non-material systems
Steel bridge	Non-material systems
Tunnel	Non-material systems
Waterways	Non-material systems
Butanediol	Organic emissions to fresh water
3-(Dimethylamino)propionitril (DMAPN)	Organic intermediate products
3-Dimethylaminopropylamine (DMAPA)	Organic intermediate products
Aliphatic Isocyanates (Mix)	Organic intermediate products
Alkylamidopropylbetaine (37%)	Organic intermediate products
Amine oxide	Organic intermediate products
Aminoethylethanolamine (AEEA)	Organic intermediate products
Amphoacetate (34%)	Organic intermediate products
C12-14 AE3	Organic intermediate products

C12-14 AE7	Organic intermediate products
C12-14 E2S (oleo) (69,8%)	Organic intermediate products
C13-15 AE3	Organic intermediate products
C13-15 AE7	Organic intermediate products
Chloroacetic acid	Organic intermediate products
Coconut diethanolamide	Organic intermediate products
Coconut oil methyl ester	Organic intermediate products
Dimethyl ether	Organic intermediate products
Dimethyl sulphate	Organic intermediate products
Dimethylamine	Organic intermediate products
Dioctyltin oxide	Organic intermediate products
Ethyl acrylate	Organic intermediate products
Ethylenediaminetetraacetic acid (EDTA)	Organic intermediate products
Ethylhexyl acrylate	Organic intermediate products
Glacial Acrylic Acid	Organic intermediate products
Glycerine (99.5%)	Organic intermediate products
Linear Alkylbenzene Sulphonic Acid (HLAS)	Organic intermediate products
Methyl acrylate	Organic intermediate products
N,N-Dimethylaminopropyl acrylamide	Organic intermediate products
n-Butyl acrylate	Organic intermediate products
Palm oil methyl ester (PME)	Organic intermediate products
R 125 (pentafluoroethane)	Organic intermediate products
R 143a (trifluoroethane)	Organic intermediate products
Sodium cumene sulphonate (40%)	Organic intermediate products
Titanium(IV) isopropoxide (TTIP)	Organic intermediate products
Triethanolamine (TEA)	Organic intermediate products
Triethanolamine Esterquats (TEA-Quat) (90%)	Organic intermediate products
Biomethane	Other fuels
Coke oven gas (exported for electricity production, in MJ)	Other fuels
Hydrogen	Other fuels
Packaging material	Packaging
Polyethylene (Packaging)	Packaging
Polyurethane flexible foam (PU) - MDI-based, no flame retardant	Packaging
Pigment (white)	Paints
Roofing membrane TECTOFIN RV 1,5 mm - Wolfin GmbH	Plastic parts
Roofing membrane WOLFIN M 1,5 mm - Wolfin GmbH	Plastic parts
Acrylonitrile butadiene styrene (ABS)	Plastics
Epoxy adhesive	Plastics
EVA adhesive	Plastics
Expandable polystyrene (EPS), white and grey	Plastics
NBR adhesive	Plastics



PE adhesive	Plastics
Phenolic resin adhesive	Plastics
Polyurethane flexible foam (PU) - TDI-based, no flame retardant, high density	Plastics
Polyurethane flexible foam (PU) - TDI-based, no flame retardant, low density	Plastics
Polyurethane flexible foam (PU) - TDI-based, with flame retardant	Plastics
PUR adhesive	Plastics
PUR dispersion adhesive	Plastics
PVAc adhesive	Plastics
PVC adhesive	Plastics
Solvent-based polychloroprene adhesive	Plastics
Solvent-based polyurethane adhesive	Plastics
Styrene acrylonitrile (SAN), a-Methyl styrene acrylonitrile (AMSAN)	Plastics
Sun protection (textile)	Plastics
UV-curing laminating adhesive	Plastics
Water-based acrylic adhesive	Plastics
XPS board with alternative FR (EXIBA/FPX; DE mix)	Plastics
XPS board with alternative FR (EXIBA; EU mix)	Plastics
XPS board with HBCD (EXIBA/FPX; DE mix)	Plastics
XPS board with HBCD (EXIBA; EU mix)	Plastics
Black tea leaves (3% H2O content)	Renewable primary products
Tea (80% H2O content)	Renewable primary products
Wood	Renewable resources
Maritime infrastructure	Systems
Vacuum isolation panel, VIP (unlaminated)	Systems
Steam (from process stages, in MJ)	Thermal energy
Thermal Energy (credit in)	Thermal energy
Thermal Energy (credit out)	Thermal energy
Thermal energy (diesel)	Thermal energy
Thermal energy from biogas (MJ)	Thermal energy
Thermal energy from fuel oil (MJ)	Thermal energy
Thermal energy from heating (MJ)	Thermal energy
C12-C13 AS (SLS) (51,7%)	Valuable substances
C16-18AE>20	Valuable substances
Fatty alcohol (C16-18)	Valuable substances
Sandwich panel facade FP-F - Brucha	Valuable substances
Sandwich panel facade PU - Brucha	Valuable substances
Sandwich panel roof PU - Brucha	Valuable substances
Sandwich panel wall PU - Brucha	Valuable substances
Sandwich panels roof DP-F - Brucha	Valuable substances
Sandwich panels wall WP-F - Brucha	Valuable substances

New production residue flows

Flow	Folder
Waste for incineration with energy recovery	Consumer waste
Waste for incineration without energy recovery	Consumer waste
Waste for landfill	Consumer waste
Waste to recycling	Consumer waste
Neutralisation sludge (OH-sludge)	Hazardous waste
BF Gas Sludge	Non hazardous non organic waste for disposal
Cold Rolling Sludge	Non hazardous non organic waste for disposal
Continuous Casting Sludge	Non hazardous non organic waste for disposal
Hot Metal Treatment Dust	Non hazardous non organic waste for disposal
Hot Rolling Sludge	Non hazardous non organic waste for disposal
Pickled hot rolled coil sludge	Non hazardous non organic waste for disposal
Secondary Steel Making Dust	Non hazardous non organic waste for disposal
Sinter / Pellet Dust	Non hazardous non organic waste for disposal
Sinter Sludge	Non hazardous non organic waste for disposal
Waste water (sludge composting)	Production residues in life cycle
Waste water (sludge deposited on landfill)	Production residues in life cycle
Waste water (sludge for agricultural use as fertilizer)	Production residues in life cycle
Waste water (sludge incineration)	Production residues in life cycle
BF gas dust	Waste for disposal
BF gas sludge	Waste for disposal
BF slag	Waste for disposal
BOF gas dust	Waste for disposal
BOF gas sludge	Waste for disposal
Rubble (from brick production)	Waste for disposal
Continuous casting scales (internal)	Waste for recovery
Continuous/batch annealing scales (home)	Waste for recovery
Diaphragm compressor	Waste for recovery
EAF dust	Waste for recovery
Gold scrap	Waste for recovery
Grinding dust (home)	Waste for recovery
Grinding dust (internal)	Waste for recovery
Grinding swarf (home)	Waste for recovery
Grinding swarf (internal)	Waste for recovery
Hydrogen compressor module	Waste for recovery

Iron scrap (Home Scrap)	Waste for recovery
Iron scrap (Internal Scrap)	Waste for recovery
Refractories	Waste for recovery
Sulphuric acid (100%)	Waste for recovery
Waste glass	Waste for recovery

GaBi ts version 7.2.1 will be available to you via the automatic update functionality in the GaBi software. No new installation procedure will be necessary.

On January 27th 2016, the new software version is available to you on the GaBi update server - the software will prompt you to download the updated version.

If you do not have a valid maintenance contract, you will not have access to this upgrade. Please contact your local GaBi sales representative for a quote gabi@thinkstep.com.

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