



Compliant to ISO 14025
Wallflex 1.25mm

This Environmental Product Declaration (EPD) discloses potential environmental outcomes compliant with ISO 14025 for business to business communication.

The declared product Wallflex 1.25mm was made by Armstrong Flooring in Australia in 2016 for sale with a 15 year warranty as wall cladding in commercial and health care sectors.

Armstrong Flooring Pty Ltd is an environmental best practice leader manufacturing Australian-made resilient vinyl flooring.

The company is committed to environmental protection through intelligent use of resources and environmental stewardship.

Its commitment is to a decreased environmental footprint overall.

Armstrong Flooring has a closed-loop flooring recycling program.

By continued innovation it is reducing energy, water and waste and driving sustainable building.

In communities in which it operates it is also being a responsible partner.

The company effort in improved sustainability has been recognised by many environmental partners.

Armstrong Flooring's operating principles are to ensure employees' rights and morale, high safety standards and fair business relations.

Actively involved in socially beneficial programs Armstrong Flooring is a partner in several environmental and educational organisations.

Armstrong Flooring has certified ISO 9001 Quality Management and ISO 14001 Environmental Management System operations.

More information is at <http://www.armstrong.com/corporate/company.html>



Figure 1 Wallflex 1.25mm Wall Cladding



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Different program EPDs may not be comparable as e.g. Australian transport is more than elsewhere. **Further explanatory information is found at <http://www.globalgreentag.com/>** or contact: certification1@globalgreentag.com © This EPD remains the property of Global GreenTag Pty Ltd.



1. Details of This Declaration

| | |
|-------------------------|--|
| Program Operator | GreenTag Global Pty Ltd hereafter called Global GreenTag noted at www.globalgreentag.com |
| EPD Number | AWF-006-2015 |
| Date issue | 26 June 2017 |
| Validity | 26 June 2020 |
| Reference PCR | Compliant with PCR:WC Wall and Ceiling Covering & Skirting Products 2015 |
| Time | Made in and sold from 2016 for 20 years use |
| Geography | Made in Australia. Uses are assumed as for Australasia. |
| Application | Commercial and Health Care building interiors |
| Functional unit | 20 year use Wallflex 1.25mm TM wall cladding 2.2 kg/m ² cradle to fate |

2. Product Characterisation

| | |
|-------------------|--|
| Definition | Armstrong Flooring Wallflex 1.25mm wall cladding for commercial and health care sectors |
| Standard | AS/NZS 3837:1998 Method of test for heat and smoke release rates for materials and products using oxygen consumption calorimeter |

3. Green Star® Certified Credits

Products are relevant to the Green Building Council of Australia's (GBCA) Green Star® scheme. If required this EPD is evidence the declared product meets the following Green Star® credits.

It may be used as evidence in Green Star® submissions for those credits.

The product is certified by GBCA recognised Global GreenTag GreenRate to meet the following credits of Green Star®:

- Design and As Built V1.1: Sustainable Product, Responsible Building Material
- Interiors V1.1 Sustainable Products, Responsible Building Materials
- Performance V1.1: Procurement and Purchasing: Refurbishment Materials

GBCA Disclaimer

Green Star® is a registered mark of the Green Building Council of Australia (GBCA). Assessments shall not be reproduced in part at any time. Rating Tools and Technical Manuals are subject to change by the GBCA.

This EPD provides Technical Opinion and as such is not endorsed by the GBCA or its agents. Green Star® Technical Manuals give technical details of credit requirements.



4. Sustainability Assessment Scores

Table 1 lists Global GreenTag Sustainability Assessment Criteria (SAC) scores prior to weighting and then used to determine the GreenTag EcoPOINT¹.

Table 1 Normalised GreenTag EcoPOINT & SAC Scores

| Category Potential | Results (-1 to +1) |
|-----------------------|--------------------|
| Building Synergy | 1.00 |
| Health & Ecotoxicity | 0.25 |
| Biodiversity | 0.59 |
| LCA Score | 0.12 |
| Greenhouse Emission | 0.15 |
| Social Responsibility | 0.65 |
| GreenTag EcoPOINT | 0.41 |

SAC scores are normalised against business as usual (BAU) product performing comparable functions under the same category rules.

Lower scores show better environmental and social benefits with fewer impacts and damages. Considering sustainability:

- worst case BAU results = 1.0,
- neutral = 0.0 and
- net positive benefit = -1.0

5. Type 1 Ecolabel

The declared product Type 1 Ecolabel achieved

Global GreenTag^{Cert™} Gold PLUS GreenRate Level A



6. Verification of this Declaration

This EPD was approved on 26th June 2017 according to requirements of ISO14025 8.1.3b.

| Role | Name | Position | Signature |
|-------------------------------|----------------|--|-----------|
| PCR Review Chair | Murray Jones | Ecuate Pty Ltd CEO | |
| LCI Developer | Delwyn Jones | The Evah Institute CEO | |
| LCIA, LCARate & EPD Developer | Mathilde Vlieg | Global GreenTag Researcher | |
| Internal LCA Audit | Shloka Ashar | Global GreenTag Lead Auditor | |
| Internal EPD Audit | David Baggs | Global GreenTag CEO & Program Director | |

¹ <http://www.ecospecifier.com.au/knowledge-green/glossary.aspx#greentagecopoint>



7. Packaging, Installation, Use & Disposal

| | |
|--|---|
| Packaging | Cardboard forms & cartons, plastic wrap & strapping on reused pallets. |
| Service life | Residential and commercial refits vary but 20 year life is assumed typical. |
| Health Safety & Environment | Apart from compliance to occupational and workplace health safety and environmental laws no additional personal protection is considered essential. |
| Residual Scrap | Mill off-cuts are minimised. Installation scrap of 5% is assumed to landfill. |
| Cleaning & Maintenance | The recommended cleaning and maintenance raises no ecosystem or human health concerns. Care and maintenance guides are on company websites. |
| Scenario | Weekly detergent spray, light mop, monthly wet machine scrub and cloth dry. |
| Recycling | Home mill, fabrication and installation scrap is reworked into new product. |
| Re-use | This study assumes 60% product is serviceable for reuse over 40 more years. |
| Disposal | It assumes 30% is recycled. Incineration is rare in Australia so none is modelled. |

8. Whole of life Performance

| | |
|-------------------------------------|--|
| Health Protection | The product does not contain levels of carcinogenic, toxic or hazardous substances that warrant ecological or human health concern cradle to grave. It passed the Ecospecifier Cautionary Assessment Process (ESCAP) and no issues or red light concerns existed for product human or ecological toxicity. |
| Effluent | The LCI results and ESCAP raised no red light concerns in emissions to water ² . |
| Waste | Cradle to grave waste to landfill was <0.01% hazardous in fuel supply chains. |
| Environmental Protection | Continuous improvement under the maker's certified ISO14001 EMS aims to avoid toxics, waste and pollution plus reduce their material and energy use. |
| Environmental Health Effects | Installed products are certified as having VOC's compliant with Green Star® IEQ VOC credits for indoor environment ³ quality credits. No other potential in-use impacts on environment or health are known. |

² According with national standards in ANZECC Guideline For Fresh & Marine Water Quality (2000)

³ in accordance with national standards and practice



9. Base Material Origin and Detail

Table 2 lists key components by function, type, key operation, source and mass share.

Table 2 Base Material

| Function | Component | Production | Origin | % |
|---------------------|----------------------------------|-------------------------------------|-------------|-------|
| White Filler | Limestone | Mine, Crush, Sieve & Haul | Australia | <65.0 |
| Binder | Suspension PVC | Extract, Chlorinate, Polymerise | Australia | <25.0 |
| Plasticiser | Diisodecyl phthalate | Drill, Farm, Extract, Blend | Pacific Rim | <10.0 |
| Plasticiser | Epoxidised Soybean Oil | Farm, Press, Refine, Mill | UK Pacific | <1.0 |
| Stabiliser | Ca Zn Stearate | Mine, Farm, Press, Refine, Mill | UK | <1.0 |
| Antioxidant | TNPP ⁴ Ba Zn Stearate | Mine, Farm, Press, Refine, Mill | UK | <1.0 |
| Coating | Polyurethane elastomer | Farm, Drill, Extract, Polymerise | Global | <1.0 |
| Whiting | Titanium Dioxide | Mine, Digest, Separate, Coat | Australia | <1.0 |
| EVA Foam | Ethylene vinyl acetate | Drill, Extract, Polymerise, Blend | Pacific Rim | <1.0 |
| Adhesive | DPGME 5 | Drill, Extract, Mill, Polymerise | Pacific Rim | <0.60 |
| Matte Agent | Silicates | Drill, Extract, Sieve, Mill, Blend | Pacific Rim | <0.15 |
| Recyclate | PC rPVC bottle | Collect, Clean, Debale ,Crush | Australia | <0.1 |
| Pigments | Iron Oxides | Recycle, Sieve, Mill, Blend | Global | <0.1 |
| Dyes | Red, Blue, Gold etc | Drill, Extract, Sieve, Mill, Blend | Global | <0.1 |
| Defoamer | Siloxanes | Drill, Extract, Polymerise, Blend | Global | <0.1 |
| Leveller | Methyl Pyrrolidone | Drill, Farm, Extract, Blend | Singapore | <0.1 |
| Cross | Polyaziridine | Drill, Extract, Polymerise, Blend | Singapore | <0.1 |
| Viscofier | Ca Stearate | Farm, Drill, Mine, Refine, Saponify | UK | <0.1 |

10. Life Cycle Impact Results

Table 3 shows Life Cycle Assessment (LCA) Eco-Indicator 99 results for 20 years of product use.

Table 3 Potential Impact Results

| Evaluation Category | Unit | Result |
|--|---|----------|
| Product mass | kg/item | 2.2 |
| EcoIndicator 99 | ecopoint | 0.48 |
| Embodied Water | kl | 144 |
| Carbon Dioxide Equivalent Emissions⁶ | kg CO _{2e} | 8.6 |
| Gross Energy & Feedstock | MJ | 131 |
| Renewable Primary Energy | MJ | 7.5 |
| Ecosystem Quality Damages | PDF*m ² *yr | 6.01E-05 |
| Human Health Damages | DALY | 8.32E-04 |
| Ozone Depletion | kg R11 _e | 7.94E-10 |
| Acidification | kg SO _{2e} | 0.28 |
| Eutrophication | kg PO ₄ ³⁻ _e | 6.55E-03 |
| Fossil Fuel Depletion | MJ _{surplus} | 5.9 |
| Mineral Resource | MJ _{surplus} | 0.048 |

⁴ Tris Nonyl Phenyl Phosphite Antioxidant

⁵ Dipropylene glycol methyl ether

⁶ Stocker et al (eds.) Climate Change 2013: The Physical Science Basis, CH8, IPCC AR5, Cambridge U Press, UK.



11. Supply Chain Modelling

Processes to acquire, refine, transport, fabricate, coat, use, clean, repair, reuse and dispose of metal, masonry, ceramic, timber, glass, plastic and composites are modelled.

These include those of:

- Mining, extracting and refining resources to make commodities and packaging;
- Acquiring, cultivating, harvesting, extracting, refining produce and biomass;
- Fuel production to supply power and process energy and freight;
- Chemicals use in processing resources, intermediates and ancillaries;
- Process energy, fuel and freight of resources, intermediates and ancillaries;
- Use, cleaning, recoating, repair, recycling, re-use and landfill, as well as
- Infrastructure process energy transformed and material wear loss e.g. tyres.

A flow chart in Figure 2 shows key product supply chain operations from cradle to fate. While all known operations are included not all are shown.

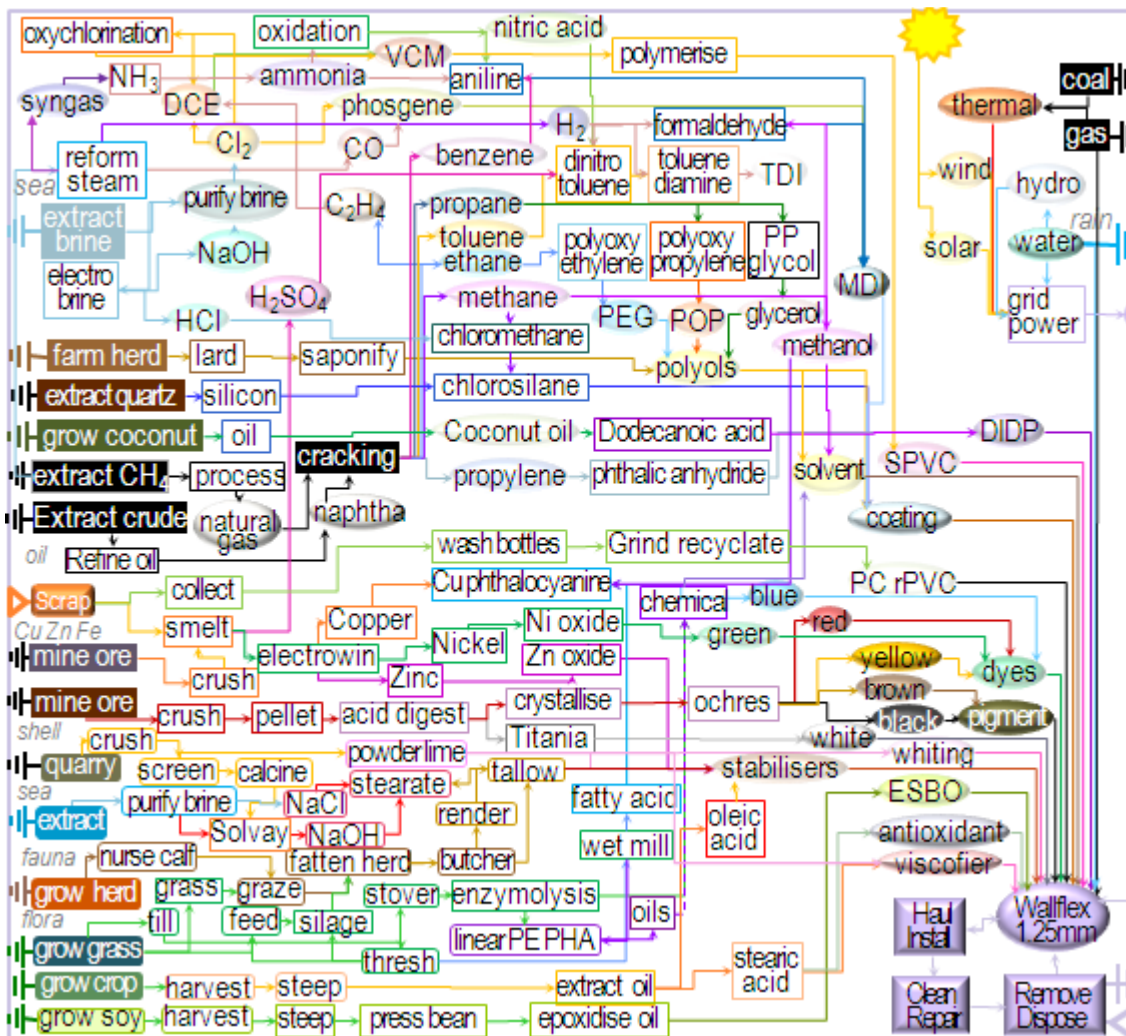


Figure 2 Major Product Operations



12. Life Cycle Assessment Method

LCA Author The Evah Institute as described at www.evah.com.au

Study Period Factory data was collected from year 2015

LCA Method Compliant with ISO 14040 and ISO 14044 Standards

LCIA method EcoIndicator 99 Life Cycle Impact (LCIA) Assessment

Scope Cradle to Fate including all supply chain phases and stages depicted in Figure 3.

Phases The LCA covered all known flows in all known stages cradle to end of life fate.

Assumptions Use is to typical Australian Facility Management professional practice.

Scenarios Use, cleaning, maintenance plus disposal and re-use were scenario-based using Facility Management Association denoted and published typical operations.

System Boundaries The LCA covers all operations in the system boundary depicted in Figure 3.

Processes All known processes are included from resource acquisition, water, fuel & energy use, power generation & distribution, freight, refining, intermediates, manufacture, scrap re-use, packing and dispatch, installation, use, maintenance and landfill. All significant waste and emission flows from all supply chain operations involved to make, pack and install the product are included.



| Phases A-D Stages 1-20 | A Produce | | | A Construct | | B Use Built Fabric Operate | | | | | | C End of life | | | | D Fate | | | | |
|------------------------------|-------------------------------------|-------------------------------------|----------------------------------|------------------------------------|--|----------------------------|------------------|----------------|-----------------|-------------------|------------------|-----------------|--------------------|--------------------|---------------|----------------------|--------------------|-----------------|-------------------|--------------------|
| Operation Modules 1-20 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | Acquire Resources & refine material | Dispatch, Transport, Ship & deliver | Fabricate, Finish & Pack product | Deliver, Unpack & dispatch packing | Prep, Build, Install, Scrap & Dispatch | Product Use | Clean & Maintain | Repair Product | Replace Product | Refurbish Product | Operating Energy | Operating Water | Deconstruct & Sort | Transport to Depot | Process Scrap | Disposal in Landfill | Potential Recovery | Potential Reuse | Potential Recycle | Potential Upcycled |
| Scope | Mandatory 1,2,3 | | | Usual 4,5 | | Usual 6 to 10 | | | | Optional | | Usual 13-16 | | | | Optional 17-20 | | | | |
| C ₂ Gate | Mandatory 1,2,3 | | | Usual 4,5 | | Usual 6 to 10 | | | | Optional | | Usual 13-16 | | | | Optional 17-20 | | | | |
| C ₂ Gate + | Mandatory 1,2,3 | | | Mandatory 4,5 | | Mandatory 6 to 10 | | | | Mandatory | | Mandatory 13-16 | | | | Optional 17-20 | | | | |
| C ₂ Grave | Mandatory 1,2,3 | | | Mandatory 4,5 | | Mandatory 6 to 10 | | | | Mandatory | | Mandatory 13-16 | | | | Optional 17-20 | | | | |

Figure 3 Phases and Stages Cradle to Grave

Evah industry databases cover all known domestic and global scope 1 and 2 operations.

They exclude scope 3 burdens from capital facilities, equipment churn, noise and dehydration as well as incidental activities and employee commuting.

The databases exist in top zones of commercial global modelling and calculating engines. Quality control methods are applied to ensure:

- Coverage of place in time with all information⁷ for each dataset noted, checked and updated;
- Consistency to Evah guidelines⁸ for all process technology, transport and energy demand;
- Completeness of modelling based on in-house reports, literature and industry reviews;
- Plausibility in 2 way checks of LCI input and output flows of data checked for validity, plus
- Mathematical correctness of all calculations in mass and energy balance cross checks.

Electricity supply models in active databases are updated annually. As each project is modelled and new data is available the databases are updated and audited by external Type 1 ecolabel certifiers.

⁷ Jones D G (2004) LCI Database for Commercial Building Report 2001-006-B-15 Icon.net, Australia

⁸ Evah Tools, Databases and Methodology Queensland, Australia at <http://www.evah.com.au/tools.html>



13. Data Sources Representativeness and Quality

Primary data used for modelling the state of art of each operation includes all known process for:

- Technology sequences;
- Energy and water use;
- Landfill and effluent plus
- Reliance on raw and recycled material;
- High and reduced process emissions;
- Freight and distribution systems.

Primary data is sourced from clients, Annual Reports and their publications on corporate locations, logistics, technology use, market share, management systems, standards and commitment to improved environmental performance. Information on operations is also sourced from client:

- Supply chain mills, their technical manuals, corporate annual reports and sector experts, and
- Manufacturing specifications websites and factory site development license applications.

Background data is sourced from the International Energy Agency, IBISWorld, USGS Minerals, Franklin Associates, Boustead 6, Plastics Europe, CML2, Simapro 8, EcoInvent 3 and NREL USLCI model databases. Information on operations is also sourced from:

- Library, document, NPI and web searches, review papers, building manuals and
- Global Industry Association and Government reports on Best Available Technology (BAT).

For benchmarking, comparison and integrity checks inventory data is developed to represent BAT, business as usual and worst practice options with operations covering industry sector supply and infrastructure in Australia and overseas.

Such technology, performance and license conditions were modelled and evaluated across mining, farming, forestry, freight, infrastructure and manufacturing and building industry sectors since 1995.

As most sources do not provide estimates of accuracy, a pedigree matrix of uncertainty estimates to 95% confidence levels of Geometric Standard Deviation² (σ_g) is used to define quality as in Table 4⁹.

Table 4 Data Quality Uncertainty (U) for 2014

| Metric σ_g | U ±0.01 | U ±0.05 | U ±0.10 | U ±0.20 | U ±0.30 |
|-------------------|------------|---------------|---------------|---------------|---------------|
| Temporal | Post 2015 | Post 2010 | Post 2005 | Post 2000 | Pre 2000 |
| Duration | >3yr | 3yr | 2yr | 1yr | <1yr |
| Data Source | Process | Line | Plant | Corporate | Sector |
| Technology | Actual | Comparable | Within Class | Conventional | Within Sector |
| Reliability on | Site Audit | Expert verify | Region Report | Sector Report | Academic |
| Precision to | Process | Line | Plant | Company | Industry |
| Geography | Process | Line | Plant | Nation | Continent |
| True of the | Process | Mill | Company | Group | Industry |
| Sites cover of | >50% | >25% | >10% | >5% | <5% |
| Sample size | >66% trend | >25% trend | >10% batch | >5% batch | Academic |
| Cut-off mass | 0.01% | 0.05% | 0.1% | 0.5% | 1% |
| Consistent to | ±0.01 | <±0.05 | <±0.10 | <±0.20 | <±0.30 |
| Reproducible | >98% | >95% | >90% | >80% | <70% |
| Certainty | Very High | High | Typical | Poor | >±0.30 |

No data set with >±30% uncertainty is used without notation in the LCA as well as the EPD.

⁹ Evah Institute data quality control system accords with UNEP SETAC Global LCI Database Quality 2010 Guidelines



14. Supply Chain Modelling Assumptions

Australian building sector rules and Evah assumptions applied are defined in Table 5.

Table 5 Scope Boundaries Assumptions and Metadata

| Quality/Domain | National including Import and Export |
|----------------------------|--|
| Process Model | Typical industry practice with currently most common or best (BAT) technology |
| Resource flows | Regional data for resource mapping, fuels, energy, electricity and logistics |
| Temporal | Project data was collated from 2014 to 2016 |
| Geography | Designated client, site, regional, national, Pacific Rim then European jurisdiction |
| Representation | Designated client, their suppliers and energy supply chains back to the cradle |
| Consistency | Model all operations by known given operations with closest proximity |
| Technology | Pacific Rim Industry Supply Chain Technology typical of 2014 to 2016 |
| Functional Unit | Typical product usage with cleaning & disposal/m ² over the set year service life |
| System Control | |
| Primary Sources | Clients and suppliers mills, publications, websites, specifications & manuals |
| Other Sources | IEA 2016, GGT 2016, Boustead 2013, Simapro 2016, IBIS 2016, EcoInvent 2016 |
| Data mix | Power grid and renewable shares updated to latest IEA 2016 reports |
| Operational | Company data for process performance, product share, waste and emissions |
| Logistics | Local data is used for power, fuel mix, water supply, logistics share & capacity |
| New Data Entry | VliegLCA, Evah Institute 2016; Global Green Tag Researchers 2016 |
| Data Generator | Manufacturers, Evah Institute 2016; GGT 2016; Meta: IBIS 2016, Other pre 2016 |
| Data Publisher | The Evah Institute Pty Ltd to Global GreenTag and designated client only |
| Persons input | All contributors cited in Evah & Global GreenTag records or websites |
| Data Flow & Mix | |
| System Boundary | Earth's cradle of all resource & emission flows to end of use, fitout or build life |
| System flows | All known from and to air, land, water and community sources & sinks |
| Capital inclusions | Natural stocks Δ , industry stockpiles Δ , capital wear Δ , system losses and use |
| Arid Practice | Dry technology adopted, Water use is factored by 0.1 as for e.g. Mining |
| Transportation | Distance >20% than EU; >20% fuel efficient larger vehicles, load & distance |
| Industrial | Company or industry sector data for manufacturing and minerals involved |
| Mining | All raw material extraction is based on Australian or Pacific Rim technology |
| Imported fuel | Mix is from nearest sources is e.g. UAE, SE Asia, Canada or New Zealand |
| Finishes | Processing inputs with finishing burdens are factored in. If not that is denoted |
| Validation | |
| Accuracy | 10 th generation study is \pm 5 to 15% uncertain due to some background data |
| Completeness | All significant operations are tracked and documented from the cradle to grave |
| Precision | Tracking of >90% flows applies a 90:10 rule sequentially to 99.9% and beyond |
| Allocation | %100 to co products on reaction stoichiometry by energetic or mass fraction |
| Burdens | All resource use from & emissions to community air land, water are included |
| Plausibility | Results are checked and benchmarked against BAT, BAU & worst practice |
| Sensitivity | Calculated U is reported & compared to libraries of Bath U RICE & EcoInvent 3.2 |
| Validity Checks | Are made versus Plastics Europe, Ecobilan, GaBi & or Industry LCA Literature |



15. References for this LCA & EPD

- Australian & New Zealand (ANZECC) Guidelines For Fresh & Marine Water Quality (2000) <http://www.environment.gov.au/water/quality/national-water-quality-management-strategy>
- Basel Convention (2011) Control of Transboundary Movement of Hazardous Waste & Disposal <http://www.basel.int/portals/4/basel%20convention/docs/text/baselconvention-text-e.pdf>
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- IBISWorld (2014) Market Research, <http://www.ibisworld.com.au/> IBISWorld Australia
- International Energy Agency (2016) Energy Statistics <http://www.iea.org/countries/membercountries/>
- ISO 9001:2008 Quality Management Systems Requirements
- ISO 14001:2004 Environmental management systems: Requirements with guidance for use
- ISO 14004:2004 EMS: General guidelines on principles, systems & support techniques
- ISO 14015:2001 EMS: Environmental assessment of sites & organizations (EASO)
- ISO 14020:2000 Environmental labels & declarations — General principles
- ISO 14024:2009 Environmental labels & declarations -- Type I Principles & procedures
- ISO 14025:2006 Environmental labelling & declarations Type III EPDs Principles & procedures
- ISO 14031:1999 EM: Environmental performance evaluation: Guidelines
- ISO 14040:2006 EM: Life cycle assessment (LCA): Principles & framework
- ISO 14044:2006 EM: LCA: Requirement & guideline for data review: LCI; LCIA, Interpretation results
- ISO 14064:2006 EM: Greenhouse Gases: Organisation & Project reporting, Validation & verification
- ISO 15392:2008 Sustainability in building construction General principles
- ISO 15686-1:2011 Buildings & constructed assets Service life planning Part 1: General principles
- ISO 15686-2:2012 Buildings & constructed assets Service life (SL) planning Part 2: prediction
- ISO 15686-8:2008 Buildings & constructed assets SL planning Part 8: Reference & estimation
- ISO 21929-1:2011 Sustainability in building construction Sustainability indicators Part 1: Framework
- ISO 21930:2007 Building construction: Sustainability, Environmental declaration of building products
- ISO/TS 21931-1:2010 Sustainability in building construction: Framework for assessment, Part 1:
- ISO 21932:2013 Sustainability in buildings and civil engineering works -- A review of terminology
- Plastics Europe (2016) Portal <http://www.plasticseurope.org/plastics-sustainability/eco-profiles.aspx>
- Pre (2016) SimaPro 8 Software, The Netherlands <http://www.pre-sustainability.com/simapro-manuals>
- Myhre et al, 2013, Anthropogenic and Natural Radiative Forcing Chapter 8 in Stocker et al (eds.) Climate Change 2013, AR5 of the IPCC, Cambridge U Press UK. <http://www.ipcc.ch/report/ar5/wg1/>
- Roache S. K. (2012) IMF Report WP/12/115 China's Impact on World Commodity Markets <http://www.imf.org/external/pubs/ft/wp/2012/wp12115.pdf> International Monetary Fund
- UNEP (2016) Persistent Organic Pollutants <http://www.chem.unep.ch/pops/> The UN
- USLCI (2016) Life-Cycle Inventory Database <https://www.lcacommons.gov/nrel/search>, USA
- U.S. Geological Survey National Minerals (2016) <http://minerals.usgs.gov/minerals/pubs/country/> USA
- US EPA (2016) Database of Sources of Environmental Releases of Dioxin like Compounds in U.S <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=20797> p 1-38, 6-9, USA



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Further and explanatory information is found at

<http://www.globalgreentag.com/>

or contact:

certification1@globalgreentag.com



**Global GreenTagCert™ EPD Program
Environmental Product Declaration
Compliant to ISO 14025**

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