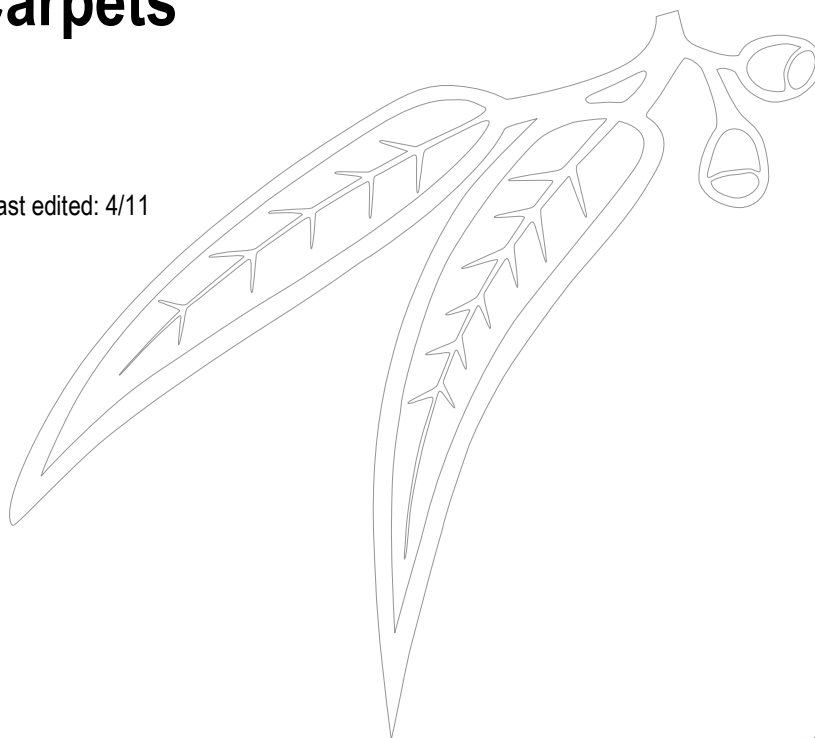


# Good Environmental Choice Australia Environmental Standard

## Carpets

Last edited: 4/11



Issued by Good Environmental Choice Australia Ltd  
PO Box 4140, Weston Creek, ACT 2611  
Phone: +61 (02) 6287 3100  
Fax: +61 (02) 6287 3800  
E-Mail: [standards@geca.org.au](mailto:standards@geca.org.au)





## USE OF GECA STANDARDS

This standard identifies environmental, quality, regulatory and social criteria that the top products sold in the Australian marketplace can meet in order to be promoted by GECA as “environmentally preferable”.

It seeks to set the benchmark for environmentally preferable products. The Australian Ecolabel Program is based on the international standard ISO 14024: "Environmental Labels and Declarations - Guiding Principles" which requires environmental labelling specifications to include criteria that are objective, reasonable and verifiable.

This standard may be used by GECA-approved environmental auditors to verify whether a product conforms to the criteria set by this standard. After a product is certified it may display the GECA Ecolabel (the “Environmental Choice Australia Mark”) to show that the product has been independently audited and demonstrates conformance with the environmental and social criteria detailed in this standard.

The purpose of voluntary environmental labels and declarations is the communication of verifiable and accurate information for the numerous environmental aspects of goods and services. As required by the Trade Practices Act the information cannot be misleading. Such information encourages the demand for, and supply of, those products that cause less harm to the environment, thereby stimulating the potential for market-driven continuous environmental improvement. Where a company has a product certified as conforming to this standard, it may gain a marketing advantage in government and business procurement programs, as well as greater market recognition in general because of its independently verified environmental attributes.

The principles of Life-Cycle Analysis have been used to set these criteria to address relevant environmental loads typical in the product category. As such, this standard may also offer guidance for Australian producers to reduce the environmentally harmful impacts of their product(s). Producers may use the environmental criteria in this standard to design and refine the processing, manufacturing and delivery of their product(s). In addition producers may find other environmental issues and more measures along the product’s life cycle, which are beyond the content of this standard. Producers are encouraged to include and adapt improvements in their environment designs and programs to aim for even better environmental results where technically feasible. GECA welcomes feedback where this has been achieved to consider incorporating improvements during revisions of the standard.

While all GECA ecolabelling standards are voluntary, nevertheless they contain criteria that address compliance with specific laws. In addition, a GECA standard may recognise specific Australian Standards. A prerequisite for certification under the GECA ecolabel is to satisfy the relevant Australian or International Standard, where it is required by law. However Australian Standards typically define “fit-for-purpose” criteria and usually do not provide assurance of environmental preferability. GECA ecolabelling standards go beyond Australian Standards and define an environmental benchmark for the product category.

For further information please contact: Good Environmental Choice Australia Ltd  
Standards Division  
Ph: +61 (2) 6287 3100  
E-mail: [standards@geca.org.au](mailto:standards@geca.org.au)

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Good Environmental Choice Australia Ltd  
PO Box 4140, Weston Creek ACT 2611 Australia. Printed in Australia



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# Carpets

## Document History

**Current Status:** 5 years  
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Previous Versions	Date	Summary of Changes
GECA-07 v1.0	April 2006	First issue of Wool Pile, Wool Blend & Modular Wool Carpet.
GECA-30 v1.0	April 2006	First issue of Broadloom Polymer Carpets.
GECA-31 v1.0	July 2006	First issue of Modular Polymer Carpets.
GECA-50 v2.0	July 2010	The three previous carpets standards (07, 30 and 31) have been combined into one standard. Product stewardship, VOC, Hazardous Materials, Design for Disassembly and Material Efficiency Criterion and Demonstration of Conformance details modified for harmonisation to International Standards and Industry Frameworks. Further TWG recommendations incorporated.

## How to Apply for GECA Certification

Manufacturers or Service Suppliers interested in GECA certification are encouraged to read carefully through the entire standard and to evaluate whether their products are likely to conform to the standard and to pass the assessment process.

To launch an application, please download and complete the application from the GECA website:

<http://www.geca.org.au/Applicationdetails.htm>.

The completed application form can be sent to GECA either by mail or by fax.

After receiving the completed application form and the application fee, GECA hands the verification process over to an appointed auditing body. The auditing body contacts the applicant and gives a clear overview of the steps needed to achieve certification for their particular product type.

## Requesting Additional Evidence

Demonstration of Conformance items are listed for each criterion. The GECA approved auditor/s will request additional information to ensure conformance on a case by case basis. Hence, the conformance items listed below are considered a guide to the minimum Demonstration of Conformance items that will be required from the applicant company.



## Definitions & Acronyms

**ACCS:** Australian Carpet Classification Scheme

**Auditor:** An auditor is responsible for determining conformance or alternatively, non-conformance of a product to each criterion within a GECA standard. An auditor is a qualified, independent professional who is authorised by GECA and an applicant to the Environmental Choice Australia Certification to conduct an examination of the records and the operations of the applicant with a view to verify the authenticity and correctness of records and operations used to support a claim conformance against a GECA standard. In 2011 GECA will use only 'GECA Designated Auditors' (refer to definition below).

**After-Chroming Techniques:** A dyeing process by which wool is dyed with chrome or chromium containing dyes and the exhausted dye baths are possible sources of residual chromium in effluents discharged to the aquatic environment.

**Biochemical Oxygen Demand (BOD):** The mass of dissolved oxygen which is required for the biochemical degradation of organic material and for the oxidation of inorganic material in a unit volume of water sample when the sample is incubated under specified conditions for a period of five days.

**Bioaccumulative Agents:** Substances that persist within the tissues of organisms because the rate of intake exceeds an organism's ability to remove the substance. Persistent organic pollutants are a type of bioaccumulative agent. Bioaccumulative agents can concentrate in progressive trophic levels in a food chain - referred to as biomagnification.

**Carcinogenic:** Substances capable of causing cancer. The International Agency for Research on Cancer (IARC) is the internationally accepted body for the classification of carcinogenic substances, dosage, exposure rates and pathways need to be taken into account. Further information on these subjects can be found within the IARC monographs for listed substances. Summaries of the monographs are available under: <http://monographs.iarc.fr/ENG/Monographs/allmonos90.php>

**CAS Number:** Chemical Abstract Service number. A unique identification code given to chemical elements, compounds, polymers, biological sequences, mixtures and alloys by the American Chemical Society.

**Chemical Oxygen Demand (COD):** Mass of oxygen equivalent to the amount of dichromate consumed by dissolved and suspended matter when a water sample is treated with that oxidant under defined conditions.

**Contaminants:** Constituents in a chemical or mixture that have not been intentionally added as ingredients, and typically found at trace levels.

**Demonstration of Conformance (DoC):** Defines sources of evidence acceptable to GECA to verify each criterion of the standard. Demonstration of Conformance information is only required when a producer or distributor applies for GECA certification. These documents must be provided to the appointed auditor in order to demonstrate conformance of products to the standard. For further information on Demonstration of Conformance requirements see also *Evidence of Conformance* at the end of the standard.

**Distributor:** See 'Producer'

**ECA-Mark:** The Environmental Choice Australia Mark (also referred to as the Environmental Choice Australia Ecolabel) - the ecolabel awarded to applicants conforming to GECA standards, after an audit by a GECA appointed auditor.

**GECA Designated Auditor/s:** A GECA Designated Auditor/s is a JAS ANZ accredited auditor/s who has been accredited to assess against GECA's scheme rules. For the most recent listing of GECA Designated Auditor/s see [www.geca.org.au](http://www.geca.org.au).

**ISO:** International Organisation for Standardisation.

**Producer/Distributor:** For the purpose of this standard the producer refers to the applicant company. Generally



the producer or distributor refers to the applicant company. The exception for this is where companies applying for GECA certification are retailers since the Environmental Choice Australia Mark can also be awarded to retailers of a product if they apply. However for some criteria it is required that the original manufacturer of the product conforms to criteria.

**Rapidly Renewable:** A resource capable of being replaced in less than 10 years time (harvest maturity) by natural ecological cycles. Examples include natural fibres, bio-based polymers and regenerated bamboo. Cellulosic fibres such as acetate, viscose rayon and lyocell are excluded.

**Readily Biodegradable:** Surfactants whose average level of biodegradation, as observed in an aerobic sewage treatment plant, is at least 90% during a residence time of not more than 3 hours. The surfactant is determined to be readily biodegradable by any of the following test methods:

- ISO 7827 (1994): Water Quality - Method by analysis of dissolved organic carbon ;
- AS 4351 (part 2 - 1996): Biodegradability - Organic Compounds in an Aqueous Medium - Determination by analysis of dissolved organic carbon ; or
- OECD Guidelines for Testing of Chemicals - Test Guidelines 301A-301E.

The inherent experimental variability of the OECD method is recognised and as such a biodegradability of at least 80% is allowed when using this test method.

**Receiving Environment:** The immediate ecosystem or habitat, including human and animal, which is likely to come in contact with the released discharge. This may include sediment and water bodies downstream of a facility's point of distance.

**Recycled Content:** For the purpose of this standard, recycled content includes:

**Pre-Consumer Material:** Post-industrial material diverted from the waste stream during a manufacturing process. Excluded is re-utilization of materials such as rework, regrind, broke or scrap generated in a process and capable of being reclaimed within the same process that generated it.

**Post-Consumer Material:** Material generated and discarded by households, commercial, industrial and institutional facilities in their role as end-users. That is, products which can no longer be used for its intended purpose. This includes returns of material from the distribution chain.

**Total Organic Carbon (TOC):** A measure of the concentration of organic carbon in water, as determined by oxidation of the organic matter into carbon dioxide (CO<sub>2</sub>).

**TVOC:** Total volatile organic compounds.

**Volatile Organic Compound (VOC):** with a boiling point of 250°C at 101.3kPa; or a vapour pressure  $\geq 0.01$  kPa at 20°C.



## BACKGROUND

A GECA product standard sets limits for the environmental load of goods and/or services throughout the major aspects of a product's life cycle. This particular standard seeks to set an environmental benchmark for carpets. The scope is intended for natural fibre products as well as synthetic fibre carpets. The criteria are used for environmental labelling (ecolabelling), implemented by Good Environmental Choice Australia (GECA). This Standard is voluntary and after verification enables certified products to display the GECA Ecolabel to show it is environmentally preferable.

The GECA Carpets Standard identifies the main impacts of the product category and sets specific requirements for performance, material content, adhesives, emissions, water consumption, energy use as well as criteria for minimising waste.

The environmental impacts of carpets occur over their entire product's life cycle: from resource extraction and fibre production to installation and disposal. Both natural and synthetic carpet fibres require water and energy intensive processes and both release harmful pollutants into the environment. Hence for all types of carpet, each step of the product's life cycle represents an opportunity to reduce environmental harm and increase environmental performance.

In addition to the fibre production impacts, some types of manufacture of the final product require large quantities of water and energy, numerous toxic chemicals and potentially harmful substances. Harmful substances can be released into the air and water. Significant volumes of waste can be produced in both manufacture and in disposal. In particular there are opportunities to substantially reduce the volume of carpet-related waste to landfill at the end of the product's lifecycle.

GECA has worked with key stakeholders to identify relevant environmental criteria and reach consensus. The standard is benchmarked so that criteria are for top products are consistent with greater customer environmental awareness and technical improvements in the carpet manufacturing processes. The intention of establishing a high benchmark is to significantly reduce the impacts of carpet manufacturing on the environment and on human health.





## 1. PRODUCT CATEGORY SCOPE

The scope of this standard is applicable to the following types of broadloom and modular tile carpets:

- Natural fibre carpets such as wool.
- Synthetic polymer fibre carpets comprising of nylon and nylon blends, olefin (polypropylene), polyester, acrylic and polyamide.
- Blends composed of material that fit into the above fibre types.

Other carpet materials that do not directly fit into the above may be considered for certification, provided the product fulfils the requirements of relevant sections of this standard.

Other types of carpet material may be added to the scope at a later date after a formal review after a formal review.

### **Carpet Systems**

Carpets sold as a system comprising of various layers or components is considered to be one product line and is considered to be one product line and must have all parts of the system certified under this standard.

### **Clones**

Products of identical material composition, but differing in blend proportions can be considered as clones (even if they are marketed under different names). Clones are able to be assessed as equivalent products at the discretion of the GECA appointed assessor. In such instances the applicant must provide both product specification and a signed declaration from an Executive Officer, stating how the products are clones.

### **Product Acceptance**

The acceptance of any product for certification under the scope of the standard is at the discretion of GECA's appointed auditor.

### **Product Acceptance**

The acceptance of any product under the scope of the standard is at the sole discretion of GECA or its appointed assessor.

### **Demonstration of Conformance**

**DoC 1.1:** Detailed description of the product(s) or product range.

**DoC 1.2:** If the product is a clone, the manufacturer must provide both product specifications and a signed declaration from an Executive Officer describing the blend and explaining how the product is a clone. The signed declaration must disclose all differences between the products, however minor in the product composition, assembly, manufacturing process etc.

**DoC 1.3:** Explanation of applicability of the product(s) to the scope of this standard.



## 2. FITNESS FOR PURPOSE

*To be certified, the product(s) must be fit to perform its intended purpose or application. A minimum level of quality and durability is implicit before the GECA ecolabel can be displayed on the product. The producer must ensure that the product is fit for its intended purpose.*

### 2.1. Applicable Standards and Demonstrated Fitness

**Criterion 2:** The product must meet or exceed the performance requirements of the relevant Australian Carpet Classification Scheme (ACCS) technical specifications for its intended application.

Carpets unable to be classified by the ACCS must comply with assessment programs recognised equivalent by equivalent by a GECA appointed assessor.

As a minimum the product must be rated as **Contract Heavy Duty** or **Residential Heavy Duty**.

#### **Demonstration of Conformance**

*(Only one of the following DoCs is required as a minimum)*

**DoC 2.1:** Documentation from the ACCS or equivalent classification schemes demonstrating the product (s) conformance to the technical specifications as a Contract Heavy Duty Carpet or Residential Heavy Duty; or

**DoC 2.2:** Unclassified products must demonstrate conformance to the testing and performance requirements of the ACCS or recognised equivalent assessment programs. Manufacturers must provide independent audit or test reports confirming conformance with the relevant Australian or international safety and/or quality standard that demonstrates fitness for purpose.

### 2.2. Warranty

**Criterion 3:** The manufacturer must offer minimum colour-fastness warranty of 2 years. Colour-fastness must be to light; and cleaning (water and shampoo solutions).

#### **Demonstration of Conformance**

**DoC 3.1:** Warranty documents provided to customers.



### 3. DESIGN FOR ENVIRONMENT

*The criteria in this section are intended to address some of the major life-cycle factors of a product that can be anticipated in sustainable design and are more easily incorporated during the design phase of product development.*

#### 3.1. Maintenance Requirements

*Maintenance and cleaning are important use-phase (on-going) life cycle impacts that need to be foreseen during the development of a product.*

**Criterion 4:** Carpet cleaning chemicals must not be prohibited from use on the product. This excludes specific chemicals nominated by the producer that if applied may void the product warranty.

##### Demonstration of Conformance

**DoC 4.1:** A signed declaration by an Executive Officer of the producer, confirming conformance to the criterion.

#### 3.2. Replacement Parts

*Ensuring the availability of replacement parts is a simple way of allowing end-users to extend the useful life of an existing product. This also reduces the need for early replacement of the product and minimises the associated environmental impacts of disposal and new production.*

**Criterion 5:** For modular carpet the product must be sold with an offer to replace or rotate worn tiles.

Consequently individual tiles must be able to be up-lifted and re-laid without causing damage to the backing system.

##### Demonstration of Conformance

**DoC 5.1:** A copy of the information explaining the availability and application of replacement parts, together with contact details of the supplier. This may be part of the care instructions, user manual, or other information physically provided with the product.

**DoC 5.2:** Signed declaration by an Executive Officer of the carpet manufacturer confirming a commitment to the provision of replacement parts and the availability of the tiles to be removed without damage.

#### 3.3. Separability/Design for Disassembly

*Products that are difficult to separate into recyclable parts at end-of-product life are significantly more likely to contribute to landfill, even if the component materials are recyclable. Products designed to be separable into recyclable parts ensure that the disposer does not face unnecessary barriers to responsible disposal of the product at the end of the products useful life. The following criteria also facilitate an effective Product Stewardship Program, mentioned in later parts of the Standard.*

**Criterion 6:** Products must be separable into recyclable, re-useable units with or without the use of specialist tools. Instructions for the disassembly method must be required to be provided with the carpets at point of sale.

##### Demonstration of Conformance

**DoC 6.1:** Where the product is comprised of more than two material types, instructions showing how disassembly can be achieved (including use of any tools); or

**DoC 6.2:** Engineer's report or disassembly demonstration. A demonstration may be performed as part of the site visit or provided on DVD with an application; and

**DoC 6.3:** Details of materials used in the product.



### 3.4. Preferable Material Content

#### **Criterion 7:**

- a) Material efficiency data must be collected for each key step in the manufacturing process in a format that allows for optimisation of production. Key processes should, as a minimum, include spinning and tufting. Data shall be collected on an hourly or daily operating basis and include as a minimum:
  - i. Yarn yield (% input weight/output weight);
  - ii. Yarn usage variance (% input weight/output weight); and
  - iii. Quantity of post-industrial waste diverted from landfill if applicable.
- b) In addition to this, the manufacturer must provide evidence of research for, or actual improvements in, increasing the proportion of raw fibre sourced from environmentally preferable materials, including any of the following:
  - i. Reducing non-renewable fibre content
  - ii. Reducing mulesed wool fibre content
  - iii. Increasing rapidly renewable fibre content
  - iv. Increasing recycled content
- c) The production process must also be maximised as per the following:
  - i. The product must contain a minimum of 50% by mass of recycled, reused and/or rapidly renewable material; or
  - ii. The backing of carpet tiles
  - iii. The manufacturer must recover 95% of all post-industrial fibre waste for reuse in alternative processing streams or applications (evidence of contractual agreements must be supplied).

#### **Demonstration of Conformance**

**DoC 7.1:** Direct and clear inclusion of these requirement in the engineers report; and product specification details;

**DoC 7.2:** For products claiming recycled material content, chain of custody evidence and contractor receipts showing volumes purchased.



## 4. RAW MATERIALS

*The requirements in this section are intended to identify and address the major environmental loads of common raw material types found in this product category.*

### 4.1. Fibre Sourcing

**Criterion 8:** All fibres must be sourced only from manufacturing facilities which ensure that yarn used for carpets is not chemically bleached.

#### Demonstration of Conformance

**DoC 8.1:** Contractual documentation from yarn suppliers confirming conformance to the criterion; and

**DoC 8.2:** Relevant product specification clearly detailing this requirement.

### 4.2. Natural Fibres

**Criterion 9:** Surfactants used for the scouring of natural fibres must be readily aerobically biodegradable or ultimately aerobically biodegradable.

#### Demonstration of Conformance

**DoC 9.1:** Test reports in accordance with the following test methods:

- OECD 301 A-F
- ultimately biodegradable in accordance with OECD 302 A-C
- or equivalent

**Criterion 10:** Spinning lubricant additions must not exceed:

- a) 6% of the weight of plant fibres;
- b) 3% of the weight of all other fibres.

#### Demonstration of Conformance

**DoC 10.1:** Documentation of production methods and chemical formulations.

**Criterion 11:** Wool must be sourced from wool scours that only discharge primary effluent by either one of the following methods:

- a) To a municipal sewage treatment plant where the sewage is separated and receives secondary and tertiary treatment before discharged. The appropriate permit must be held; or
- b) To an appropriate contained treatment system where effluent cannot flow directly into water bodies. Once released the treated effluent is of a suitable quality and will not harm the receiving environment.

Suitable treatment systems are anaerobic digestion, evaporation/incineration or land disposal covered by a Discharge Consent (or equivalent).

#### Demonstration of Conformance

**DoC 11.1:** Signed declaration from wool scouring facilities confirming conformance to the criterion; and

*(Only one of the following DoCs is required)*

**DoC 11.2:** (Part a.) Documentation of waste water discharge to appropriate sewerage plants, including any relevant permits; or

**DoC 11.3:** (Part b.) Process diagrams from the wool scouring facilities showing the contained treatment system, expected water quality, actual water quality measurements and description of the receiving environment.



**Criterion 12:** Rinse water effluent must not be discharged directly into water bodies, unless the discharge is covered by a Trade Waste Discharge Permit or equivalent.

The discharge when fully mixed must not raise the Biochemical Oxygen Demand (BOD) level of the water body by more than 2.5 mg/L.

In a flowing water body, full mixing is considered to have occurred at a point downstream of the discharge equivalent to 10 times the width of the water body. In a static water body, full mixing is considered to have occurred at a point 200 metres from the discharge point.

**Demonstration of Conformance**

*(Only one of the following DoCs is required)*

**DoC 12.1:** Copies of Trade Waste Discharge Permit or equivalent documentation; or

**DoC 12.2:** Test reports in conformance to ISO 5815:1989 or equivalent and relevant calculations.

Monitoring must be conducted once a month (at minimum). The final calculation must be the annual average of water quality measurements.

**Criterion 13:** Wool grease content in the primary effluent, before discharge or treatment, must not exceed 40 kg/tonne of greasy wool scoured.

**Demonstration of Conformance**

Calculations of wool grease content in the primary effluent, where calculations must be based on a 12 month average of wool grease levels in effluent, annual water use and water use per 1000 kg.

**DoC 13.1:** Relevant documentation of calculations, quality control and production methods (including annual effluent monitoring results, annual water use and water use per 1000 kg of product).

**Criterion 14:** Total water use measured at the water intake must not exceed 30,000 l/tonne of greasy wool scoured. Measurement of water use must be continuous.

**Demonstration of Conformance**

**DoC 14.1:** Calculation of the total water used per tonne of greasy wool scoured with the calculation based on a 12 month average.

**DoC 14.2:** Documents to support calculation, including total annual water used for the scouring processes and amount of greasy wool produced in kilograms or tonnes.

**Criterion 15:** Total energy used for the greasy wool scouring must not exceed 40 GJ/tonne of greasy wool scoured.

The energy use of water treatment facilities is exempt from calculation of total energy for the above criterion.

**Demonstration of Conformance**

**DoC 15.1:** Outline of energy use for the greasy wool scouring process (spreadsheet, flow diagrams, etc), including:

- A clear statement of the boundary conditions used in the calculation (eg. what is included, what is not and how far up the supply chain does the calculation go); and
- A clear statement of the most energy intensive step in the production process.



### 4.3. Synthetic Fibres

**Criterion 16:** Annual air emission levels for NO<sub>x</sub> and SO<sub>2</sub>, from the production of polyamide and polypropylene (PP) fibres must not exceed the limits in Table 1.

**Table 1:** Air Emission Limits from Synthetic Fibre Production

Production Fibre	NO <sub>x</sub> Emission Limit	SO <sub>2</sub> Emission Limit
Polyamide 6 (monomer production)	10 g/kg of finished product	-
Polyamide 6.6 (monomer production)	50 g/kg of finished product	-
Polypropylene (monomer production, polymerization & granulation)	12 kg/tonne of PP	11 kg/tonne PP

**Criterion 17:** Average annual emission of VOC into the air as a result of polymerisation must not exceed 1.2 g/kg polyester production.

**Criterion 18:** Average annual air emissions of acrylonitrile (during polymerisation and other processes up to the step of being solution ready for spinning) must be less than 1 g/kg of the fibre production.

**Demonstration of Conformance (for Criteria 17, 18 and 20)**

**DoC 18.1:** Calculation and supporting documents from the fibre manufacturer on their air emissions, arising from the relevant fibre production.

**Criterion 19:** Residual acrylonitrile content in fibres after fibre production must be less than 1.5 mg/kg.

**Demonstration of Conformance**

**DoC 19.1:** Test reports confirming conformance to the criterion.

### 4.4. Padding and Backing Material

**Criterion 20:** The following substances must not be used in the production of any plastic or foam products or in the cleaning of production equipment:

- Chlorofluorocarbons (CFC)
- Hydrochlorofluorocarbons (HCFC)
- Hydrofluorocarbons (HCF)
- Methylene Chloride
- Any halogenated organic solvents

If recycled plastic or foam is used in the product this must be stated. Recycled content containing, or having been treated with halogenated substances during previous lifecycles are exempt from this criterion.

**Demonstration of Conformance**

**DoC 20.1:** Signed declaration by an Executive Officer of the manufacturer of the padding and backing material, to the conformance of the criterion.

If recycled plastic or foam is used in the product this should be clearly stated.

**DoC 20.2:** List of chemicals used in padding and backing material and visual inspection of the facility and the chemicals used.

**Criterion 21:** If 1,3-butadiene is used in latex rubber or foams, its residual concentration must be less than 1 mg/kg of the latex rubber or foam product.



**Demonstration of Conformance**

**DoC 21.1:** A report on a test carried out in accordance with the following procedure must be provided.

Procedure: Grind and weigh a sample of the cured product before analysis. Sampling must be done using of a headspace sampler then analysed by gas chromatography, with detection by use of a flame ionization detector.

**Criterion 22:** All petrochemical raw materials must be sourced from a facility that complies with appropriate environmental legislation.

**Demonstration of Conformance**

**DoC 22.1:** Signed declaration by an Executive Officer from the petrochemical raw material supplier conforming to the criterion.

**4.5. Rubber**

**Criterion 23:** Halogenated organic substances and phthalates must not be added to rubber during manufacture. This criterion does not replace 5.1 Hazardous Materials.

Post-consumer recycled content that may contain halogenated organic substances or phthalates is permitted provided that these substances are encapsulated in the process of recycling.

Note: all natural rubber derived from virgin or pre-consumer recycled material must comply with section 3.1 Timber and Natural Materials.

**Demonstration of Conformance**

**DoC 23.1:** Evidence of material sourcing for any rubber used; and

**DoC 23.2:** Signed declaration of non use from an Executive Officer of the Officer of the company that produces the rubber, or

Evidence of how the contaminants in recycled material are bound in the final product.





**Criterion 24:** The total discharges to water from the production of foam or rubber must be treated and decreased by 90% (measured as COD or TOC) in on-site or external sewage treatment works prior to being discharged to the receiving environment.

**Demonstration of Conformance**

**DoC 24.1:** Wastewater treatment test reports in conformance with the ISO 6060, ASTM D 1252-00 or equivalent.

**4.6. Adhesives**

**Criterion 25:** Adhesives recommended for the installation of certified products must be water-based, pressure sensitive, and contain no more than 5% VOC by weight.

Adhesives must not contain alkylphenolethoxylates, halogenated solvents, bioaccumulative preservatives, and phthalates other than DINP (di-isononyl phthalate) and DIDP (di-isodecyl phthalate).

Adhesives shall not be capable of exposing users to carcinogenic substances in categories 1, 2A and 2B as classified by the WHO International Agency for Research on Cancer at levels greater than 1/20<sup>th</sup> of the limits set by the Australian National Occupational Health and Safety Commission (NOHSC) or National Industrial Chemicals Notification and Assessment Scheme (NICNAS).

**Demonstration of Conformance**

**DoC 25.1:** Technical specifications of the adhesive which demonstrates its compliance the criterion. This may include an MSDS and/or ingredients list.

Adhesives certified to GECA 01-2007 Adhesives standard are compliant with this criterion.



## 5. HAZARDOUS MATERIAL

*The criteria in this section are intended to address some of the main hazardous substances found within the product category, added to the product, or to ingredients during manufacturing. The intention is to reduce hazardous pollutants entering the environment*

### 5.1. Hazardous Materials

**Criterion 26:** In order to address human and environmental health risks, substances which are classifiable as hazardous according to any of the following categories must not be added to carpet products or their components, or used in the manufacturing process.

- Heavy metals: antimony, arsenic, cadmium, chromium, copper, lead, mercury, selenium and tin;
- Potentially explosive chemicals
- Acutely toxic substances including any R26-28 substances, and Occupational Safety and Health Administration (OSHA) highly hazardous chemicals, toxics and reactives  
[http://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=10647](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10647)
- Irritants and sensitising agents including R36-38 and R42-43 substances
- Endocrine disruptors and R60-64 substances
- Environmental hazards including R50-59 substances
- Carcinogens, teratogens and mutagens including:
  - any R45-49 substances,
  - IARC group 1 or 2A substances,
  - EU consolidated list of C/M/R category 1 or 2 substances
- Rotterdam Convention Annex III substances

Exemptions for a specific substance may be permitted only where the applicant can demonstrate that the substance:

- is necessary for performance or safety reasons; and
- is stored and managed in a manner that prevents environmental pollution during manufacture; and
- the substance does not pose a health risk to the end user or manufacturing staff. The applicant must demonstrate that exposure to the substance is below No Observable Adverse Effect Level or zero if NOAEL is unknown; and
- the substance cannot enter the environment during the manufacturing process, as a result of use, or as a result of disposal by landfill or incineration.

**Note:** All substances used in the manufacture of the product must also meet criterion 26.

Manufacturers that use potentially explosive chemicals must also demonstrate that there is an ISO 14001 Environmental Management System (EMS) in place that requires, at minimum, licensed handlers, and procedures for storage and handling.

#### Demonstration of Conformance

**DoC 26.1:** A schedule of the constituent chemical substances in g/kg used in the manufacture of the product that are classified as harmful, and relevant MSDS; and

**DoC 26.2:** Copy of documentation clearly outlining how each chemical is used, managed and stored; and

**DoC 26.3:** Where an exemption is claimed, a signed declaration from an Executive Director of the applicant company stating that the substance is chemically bound in the finished product, the purpose for which the given substance is necessary; and evidence that human exposure and environmental contamination are prevented.

**DoC 26.4:** If claiming an exemption for potentially explosive chemicals, the applicant must also provide details of the ISO 14001 EMS in place.



**Criterion 27:** The following compounds, their functional derivatives or in-situ precursors must not be added to finished products, their component parts or be used at any stage of the manufacturing process, including as preparatory agents, cleaners or degreasers in the production facility:

- Phthalates except DINP (di-isononyl phthalate, CAS 28553-12-0 and 68515-48-0) and DIDP (di-isodecyl phthalate, CAS 26761-40-0 and 68515-49-1);
- Polybrominated diphenyl ethers (PBDE), or short-chain (<13 C) chlorinated organic flame retardants;
- Chlorophenols including pentachlorophenol (PCP);
- Bisphenol A;
- Tar oils (benzo (a) pyrene);
- Fluoropolymer additives;
- Aniline based amines;
- Aziridine or polyaziridines;
- Dimethyl ammonium chlorides: Bis(hydrogenated tallow alkyl) dimethyl ammonium chloride (DTDMAC), Distearyl dimethyl ammonium chloride (DSDMAC), and Di(hardened tallow) dimethyl ammonium chloride (DHTDMAC)
- Ethylene diamine tetra acetate (EDTA) or ethylene diamine tetra acetic acid
- Linear alkylbenzene sulfonates (LAS)
- Alkylphenolethoxylates (APEO) and their derivatives (APDs)
- Diethylene triamine penta acetate (DTPA)

**DoC 27.1:** A schedule of the constituent chemical substances in g/kg used in the manufacture of the product that are classified as harmful, and relevant MSDS; or

**DoC 27.2:** A signed declaration from an Executive Director of the applicant company stating that the above compounds, their functional derivatives or in-situ precursors are not added to finished products, their component parts or be used at any stage of the manufacturing process, including as preparatory agents, cleaners or degreasers in the production facility.

## 5.2. Dyes, Colourings and Stainblockers

**Criterion 28:** After-chroming techniques must not be used in the dyeing or colouring of fibres. Sulphonated phenolic stain blockers must be applied in closed loop systems at concentrations in the final product less than 1g/m<sup>2</sup> of carpet

### Demonstration of Conformance

**DoC 28.1:** MSDSs or all stainblockers used in the product and NATA accredited test results of final concentration in the carpet.

**DoC 28.2:** Signed declaration by an Executive Officer of the producer or distributor confirming conformance to the criterion.

**Criterion 29:** Dyes must not contain substances classified as mutagenic, toxic to reproduction according to the EU Commission Decision 2002/371/EC (Appendix 1) or category 1 or 2A carcinogens as classed by the International Agency for Research on Cancer – <http://monographs.iarc.fr/ENG/Classification/index.php>

### Demonstration of Conformance



**DoC 29.1:** MSDSs of all dyes used in the product.

**DoC 29.2:** Signed declaration by an Executive Officer of the manufacturer confirming conformance of the criterion.

**Criterion 30:** Azo dyes that may cleave to any one of the carcinogenic aromatic amines listed in Table 2 must not be used in products(s).

**Table 2:** Aromatic amines as listed in EU Directive 2002/61/EC

Name	CAS number	Name	CAS number
4-aminodiphenyl	92-67-1	3,3-dimethylbenzidine	119-93-7
Benzidine	92-87-5	3,3-dimethyl-4,4-diaminodiphenylmethane	838-88-0
4-chloro-o-toluidine	95-69-2	p-cresidine	120-71-8
2-naphthylamine	91-59-8	4,4-methylene-bis-(2-chloroaniline)	101-14-4
o-aminoazotoluene	97-56-3	4,4-oxidianiline	101-80-4
2-amino-4-nitrotoluene	99-55-8	4,4-thiodianiline	139-65-1
p-chloroaniline	106-47-8	o-toluidine	95-53-4
2,4-diaminobenzidine	615-05-4	2,4-diaminotoluene	95-80-7
4,4-diaminodiphenylmethane	101-77-9	2,4,5-trimethylaniline	137-17-17
3,3-dichlorobenzidine	91-94-1	o-anisidine	90-04-0
3,3-dimethoxybenzidine	119-90-4	4-aminoazobenzene	60-09-3

**Demonstration of Conformance**

**DoC 30.1:** Signed declaration by an Executive Officer of the manufacturer confirming conformance to the criterion.

**Criterion 31:** The Chemical Oxygen Demand (COD) level in dye house effluent must not exceed 35 kg/tonne of fibre dyed, unless the effluent is sent to a municipal treatment plant.

**Demonstration of Conformance**

**DoC 31.1:** Test reports in conformance with the ISO 6060, ASTM D 1252-00 or equivalent.

Testing must be conducted on a combined 5-day wastewater sample and reported as an annual average.

Sampling for COD analysis must take place after the operation of any on-site wastewater treatment.

**Criterion 32:** Effluent from the dye house must not contain more than 3 ppm of total chromium (excluding chromium VI, which is not to be used).

**Demonstration of Conformance**

**DoC 32.1:** A test report from one of the following test methods:

- BS EN ISO 11885:1998 - Water quality. Determination of 33 elements by inductively coupled plasma atomic emission spectroscopy (ICP-AES)
- ISO 17294-2:2003 - Water quality. Determination of 62 elements by inductively coupled mass spectrometry (ICP-MS)
- prEN 1233
- or equivalent test methods



### 5.3. Flame Retardants

**Criterion 33:** Certified products must not use inorganic ammonium phosphates (diammonium phosphates, ammonium polyphosphates etc.), or polybrominated diphenyl ethers as flame retardants.

**Demonstration of Conformance**

*(Only one of the following is required)*

**DoC 33.1:** If flame retardants are not used this must be clearly stated in a signed document by an Executive Officer of the manufacturer; or

**DoC 33.2:** If flame retardants are used, documentation listing flame retardants used and relevant MSDS.

**Criterion 34:** If boron compounds are used, it must be bound directly with the polymer during production.

**Demonstration of Conformance**

*(Only one of the following DoCs required)*

**DoC 34.1:** Signed document by an Executive Officer of the manufacturer confirming conformance to the criterion; or

**DoC 34.2:** If boron is not used in the product this must clearly be clearly stated in a signed document by an Executive Officer of the manufacturer.

**Criterion 35:** If antimony oxide based flame retardants are used, it must be bound directly with the polymer during production. Antimony trioxide is prohibited in certified products.

**Demonstration of Conformance**

*(Only one of the following DoCs required)*

**DoC 35.1:** Signed document by an Executive Officer of the manufacturer confirming conformance to the criterion; or

**DoC 35.2:** If antimony is not used in the product this must clearly stated in a signed document by an Executive Officer of the manufacturer.

### 5.4. Biocide Treatment

**Criterion 36:** Insect-resistant agents must not be applied during scouring at (raw fibre or yarn stage) opening, carding or spinning operations.

**Demonstration of Conformance**

**DoC 36.1:** Signed declaration from an Executive Officer of the producer or distributor, confirming insect resistant agents are not applied during scouring at opening, carding or spinning operations.

**Criterion 37:** Natural materials used in carpets must not be treated or impregnated with fungicides and insecticides that are classified by the IARC as Type 1 or 2A. Refer to :<http://monographs.iarc.fr/ENG/Classification/index.php>

**Demonstration of Conformance**

**DoC 37.1:** MSDSs of any fungicides and insecticides used.

**Criterion 38:** Natural fibres intended for carpet must not be treated with synthetic pyrethroids for insect-resistance during the scouring process.

**Demonstration of Conformance**

**DoC 38.1:** Signed declaration from an Executive Officer of the producer or distributor, confirming conformance of to the criterion.



**Criterion 39:** Animal fibres must be treated against carpet moth and carpet beetle attack to the minimum requirement of the Australian Carpet Classification Scheme (ACCS) or Woolmark/Woolmark blend E10 specifications, or the wool interiors specification.

**Demonstration of Conformance**

*(Only one of the following DoCs is required)*

**DoC 39.1:** Evidence of certification to one of the above classification schemes; or

**DoC 39.2:** Test reports from an authorised facility confirming conformance to the criterion with a signed declaration from an Executive Officer from the manufacturer.

**Criterion 40:** If the moth proofing agents permethrin or bifenthrin are used, the levels of these agents in total factory effluent must not exceed::

Permethrin 9.5 g/tonne of treated wool

Bifenthrin 0.25 g/tonne of treated wool

Criterion applies to the effluent from the scouring and dye baths facilities.

**Demonstration of Conformance**

**DoC 40.1:** Test reports, calculations and supporting documentation.

Testing must be conducted on a combined 5-day wastewater sample and reported as an annual average.



**Criterion 41:** The sum total content of each of the following groups of biocide on greasy wool fibres must not exceed the concentrations in Table 3.

**Table 3:** Wool Biocide Limits

Biocide	CAS number	Max Total Concentration
α- hexachlorocyclohexane	319-84-6	0.5 ppm
β- hexachlorocyclohexane	319-85-7	
γ- hexachlorocyclohexane (lindane)	58-89-9	
δ- hexachlorocyclohexane	319-86-8	
Aldrin	309-00-2	
Dieldrin	60-57-1	
Endrin	72-20-8	
P, p'-DDT	50-29-3	
P, p'-DDD	72-54-8	
Cypermethrin	52315-07-8	
Deltamethrin	52918-63-5	
Fenvalerate	51630-58-1	
Cyhalothrin	68085-85-8	
Flumethrin	69770-45-2	
Chlorpyrifos	39475-55-3	2 ppm
Propetamphos	31218-83-4	
Diazinon	333-41-5	
Dichlofenthion	97-17-6	
Fenchlorphos	299-84-3	
Chlorfenvinphos	470-90-6	
Diflubenzuron	35367-38-5	2 ppm
Triflumuron	64628-44-0	

**Demonstration of Conformance**

(Only one of the following DoCs required)

**DoC 41.1:** If the biocides in Table 3 are not used, this must be stated clearly in a document, signed by an Executive Officer of the wool supplier, supported by:

- Organic certification; or
- If products are uncertified, details of the wool supplier, rearing area and other relevant material.

Or

**DoC 41.2:** If the above biocides are used, signed documentation from the wool supplier on the levels of biocides used, measured as mg/kg fibre and procedure of application.

As documentation is dependent on the wool producer's knowledge and control of procedures, evidence of criterion conformity can be presented as annual test reports using modified methods of the following tests, for the listed substances:

- a) US EPA 3540A - Soxhlet extraction
- b) US EPA 3640A - Gel permeation clean up
- c) US EPA 8270A – Semi-volatile organic compounds by gas chromatography/mass spectrometry (GC/MS): capillary column technique
- d) Or equivalent reports from a NATA accredited testing laboratory



## 6. WATER, ENERGY AND AIR EMISSIONS

### 6.1. Water Documentation and Minimisation

**Criterion 42:** In order to reduce water consumption, manufacturers must either:

- Colour products using solution dyeing;
- Have a total process water consumption of  $\leq 50$  L/kg of final product; or
- Recycle a minimum of 40% of dyeing process water; or
- The total product life cycle water footprint must be measured on a product functional unit basis (as defined by ISO 14040:2006 and made publicly available).

Applicants must also gather data on water usage and details of any minimisation measures such as water recycling.

#### Demonstration of Conformance

**DoC 42.1:** Documentation of water consumption with details on how water use has been minimised.

Documentation must include total water usage and the amount of product produced in m<sup>2</sup> within a minimum 3 month period (minimum).

### 6.2. Energy Documentation

**Criterion 43:** Using the Energy Conversion Table in Appendix A, energy used in each stage of the manufacturing process must be documented. At minimum, records for each process stage must include energy source (eg grid electricity, coal diesel etc) and energy mass or volume. Energy mass or volume must be converted to energy in units of MJ which will then be used to calculate equivalent carbon emissions for each stage of the process.

#### Demonstration of Conformance

**DoC 43.1:** Completed Energy Conversion Table.

**DoC 43.2:** Spreadsheets or flowcharts that outline the energy use of the production process, including:

- A clear statement of the boundary conditions used in the calculations (eg what is included and what is not, how far up the supply chain does the calculations go).
- A clear statement of the most energy intensive step in the production process.

**DoC 43.3:** Signed declaration from an Executive Officer of the manufacturer, that all energy used in the production of the product has been measured and disclosed.





### 6.3. Air Emissions – VOC

*Volatile Organic Compounds (VOC) released by solvents and other substances reduce indoor air quality in buildings. Indoor air quality is vital for occupant health. Thus, limiting the VOC content is important for a healthy building.*

**Criterion 44:** Products must not produce a total VOC emission greater than 0.5 mg/m<sup>2</sup>/hr or a 4-phenylcyclohexene emission greater than 0.05 mg/m<sup>2</sup>/hr.

Samples must be tested within three days (72 hours) of manufacture and immediately after unpacking unless specified otherwise by the sampling protocols in the standards listed below. Samples must be packed for delivery to the lab to minimise off-gassing in accordance with laboratory instructions.

#### Demonstration of Conformance

**DoC 44.1:** Test reports on VOC emissions using one of the following test methods:

- ASTM D5116-06 Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Materials/Products; or
- ASTM D6670-01(2007) Standard Practice for Full-Scale Chamber Determination of Volatile Organic Emissions from Indoor Materials/Products.

**DoC 44.2:** If the sample is not tested within three days of receipt, confirmation from the accredited laboratory of the appropriate treatment of the sample in accordance with the sampling protocol of the relevant ASTM standard requirements.

**DoC 44.3:** A copy of the lab instructions for sample preparation for delivery to the laboratory.



## 7. WASTE, PACKAGING AND PRODUCT STEWARDSHIP

*Previous sections of this standard apply to the characteristics of the product and the production process. This section is intended to address the impacts arising during the remainder of the product's life cycle.*

### 7.1. Waste Minimisation

**Criterion 45:** Material flows must be documented in the following ways:

- All material flows related to the product must be documented by mass or volume for each stage of the production process.
- Waste production must be recorded in kg of waste produced per kg of product produced.

#### Demonstration of Conformance

**DoC 45.1:** Outline of material flows for each stage of the production process. This can be in the form of a spreadsheet or flow diagram.

**DoC 45.2:** Records of waste production over a minimum 3 month period (minimum) prior to audit. Waste production must be recorded in kg of waste produced per kg of product produced.

**Criterion 46:** The manufacturer must have effective policy and procedure(s) to minimise waste, including methods to recycle waste materials from the production process.

#### Demonstration of Conformance

**DoC 46.1:** Policy and procedure documentation used in implementing the minimisation waste.

### 7.2. Product Stewardship

**Criterion 47:** The applicant shall:

- accept their product without additional cost (excluding transportation costs) for further recycling in a specialist recycling facility; or
- have arrangements with a local recycler to accept the product; or
- have an established product stewardship program. Products collected under the scheme shall not be disposed of in landfill or by incineration. Diverting product from landfill to an alternative use (such as weedmatting) is acceptable under product stewardship; or
- have contractual arrangements with a third party who are able to recycle or refurbish the item. Contractual arrangements with the third party should nominate the estimated volume of product to be processed annually.

Overall, the applicant must demonstrate that the necessary arrangements are in place to deliver the claims of the product stewardship program. Details relating to the above product stewardship programme requirements and contact details for the programme operator(s) must also be made publicly available from the official company website.

#### Demonstration of Conformance

**DoC 47.1:** Copy of instructions outlining the take back service including the costs, contact details of the take-back service, relevant website documentation; and

**DoC 47.2:** Copy of contractual agreements existing between the applicant(s) with either of the following: third party suppliers, transport companies, charities, second hand retailers or refurbishment companies.



### 7.3. Product Information

**Criterion 48:** Products must be accompanied by the following information for product suppliers, installers and consumers, clearly stating:

- Product composition;
- The appropriate type of area to use the product;
- Installation methods, including recommended adhesives;
- Cleaning and care instructions that prolongs the usable lifespan of the product. Care instructions must not specify nor require the use of any substance restricted under any section of this standard; and
- Recycling instructions or details of the product stewardship offer.

#### **Demonstration of Conformance**

**DoC 48.1:** Relevant care/maintenance instructions or a user manual with information that fulfil the above criteria.

*(Only one of the following DoCs is required as a minimum)*

**DoC 48.2:** Sample of product packaging; or

**DoC 48.3:** Visual inspection of information on product packaging during the site visit.

### 7.4. Packaging Requirements

**Criterion 49:** Halogenated plastics must not be used in product packaging.

#### **Demonstration of Conformance**

**DoC 49.1:** Ingredients list of substance(s) incorporated in the packaging material.

**Criterion 50:** Packaging must be able to be recycled by local recycling facilities.

#### **Demonstration of Conformance**

**DoC 50.1:** Signed declaration from an Executive Officer of the company, confirming conformance to the criterion.



## 8. ENVIRONMENTAL CLAIMS

*This section addresses the need to ensure that any environmental claims made beyond the scope of this standard by the manufacturer are verifiable.*

### 8.1. Public Claims

**Criterion 51:** Any product making environmental claims beyond the scope of this Standard must comply with ISO 14021.

#### **Demonstration of Conformance**

**DoC 51.1:** Independent review demonstrating that self-declared claims conform to ISO 14021.

**DoC 51.2:** Signed declaration from an Executive Officer of the company, confirming there are no self-declared environmental claims for the product(s) or that any such declarations will conform to ISO 14021



## 9. SOCIAL AND LEGAL COMPLIANCE

*This section addresses compliance with law and social attributes of the producer or distributor. Criteria for social aspects of the product are required under the international standard for ecolabelling (ISO 14024) and this section is common to all GECA standards. Equivalent sections are included in standards of all other GEN member ecolabelling bodies around the world. The social aspect partially addresses the third dimension of sustainability - Society. This was first understood by producers under the name "Corporate Social Responsibility" (CSR). In this standard social criteria include laws for equal opportunity, safety and protection of workers. GECA certification cannot be given to any company that illegally exploits workers or their families.*

### 9.1. Environmental Legislation

**Criterion 52:** The producer is required by law to comply with relevant environmental legislation and government orders at the Local, State, and Commonwealth levels, (if these have been issued). Where a producer is from an overseas jurisdiction, it is that jurisdiction's environmental regulations that apply. Where the producer has been found guilty of a breach of any environmental legislation or permit(s) within the previous 2 years, there must be evidence of corrective action.

#### Demonstration of Conformance

**DoC 52.1:** Signed declaration by an Executive Officer of the producer or distributor confirming compliance with laws under this criterion;

**DoC 52.2:** Any relevant permits granted by the EPA or an equivalent national body.

**DoC 52.3:** Evidence of corrective action following a guilty verdict (if applicable).

### 9.2. Fair Pay

**Criterion 53:** All employees must be covered by a Federal or State award or a certified industrial agreement or a registered agreement as determined by the Australian Government Workplace Authority, or a State or Territory Workplace Relations Agency, or a workplace agreement in compliance with Workplace Relations Act 1996.

Part 7 - The Australian Fair Pay and Conditions Standard. Where a producer is from an overseas jurisdiction, it is that jurisdiction's equivalent regulations that apply.

#### Demonstration of Conformance

**DoC 53.1:** Signed declaration by an Executive Officer of the producer or distributor confirming compliance with laws under this criterion;

**DoC 53.2:** Sample payslips and sample typical workplace agreement offered to the producer's employees.

### 9.3. Workplace Safety

**Criterion 54:** A producer must demonstrate general compliance with State or Territory Legislation concerning Occupational, Health and Safety and/or the Commonwealth Safety, Rehabilitation and Compensation Act 1988, where applicable. Where a producer is from an overseas jurisdiction, it is that jurisdiction's equivalent regulations that apply. Where a producer has been found guilty of a breach of relevant legislation within the last 2 years, there must be evidence of corrective action.

#### Demonstration of Conformance

**DoC 54.1:** Signed declaration by an Executive Officer of the producer or distributor confirming compliance with laws under this criterion;

**DoC 54.2:** The producer's OH&S policy and procedures; and

**DoC 54.3:** Evidence of corrective action following a guilty verdict (if applicable).



#### 9.4. Equal Opportunity

**Criterion 55:** The producer must demonstrate general compliance with the requirements of the Racial Discrimination Act 1975, Sex Discrimination Act 1984, Disability Discrimination Act 1992, Equal Opportunity for Women in the Workplace Act 1999, and complementary State Legislation. The producer cannot be in the list of 'named' or non-compliant employers under the Equal Opportunity for Women in the Workplace Act 1999. Where a producer/applicant company is from an overseas jurisdiction, it is that jurisdiction's equivalent regulations that apply. Where a producer has been found guilty of a breach of relevant legislation within the last 2 years, there must be evidence of corrective action.

##### Demonstration of Conformance

**DoC 55.1:** Signed declaration by an Executive Officer of the producer or distributor confirming compliance with laws under this criterion;

**DoC 55.2:** Producer's relevant corporate policies and procedures; and

**DoC 55.3:** Evidence of corrective action following a guilty verdict (if applicable).

**DoC 55.4:** The auditor will verify that the company does not appear on the following list:

[http://www.eowa.gov.au/Reporting\\_And\\_Compliance/What\\_Happens\\_if\\_my\\_Report\\_does\\_not\\_Comply/List\\_of\\_Non\\_Compliant\\_Organisations.asp](http://www.eowa.gov.au/Reporting_And_Compliance/What_Happens_if_my_Report_does_not_Comply/List_of_Non_Compliant_Organisations.asp)

#### 9.5. Lawful Conduct

**Criterion 56:** The producer must not have been convicted of any breach of criminal law, any breach of the Trade Practices Act 1974 or the Corporations Act 2001, including prosecution or de-listing by the Australian Stock Exchange (ASX, or international equivalent). Where a producer is from an overseas jurisdiction, it is that jurisdiction's equivalent regulations that apply. Where a producer has been found guilty of a breach of relevant legislation within the last 2 years, there must be evidence of corrective action.

##### Demonstration of Conformance

**DoC 56.1:** Signed declaration by an Executive Officer of the producer or distributor confirming compliance with laws under this criterion; and

**DoC 56.2:** Evidence of corrective action following a guilty verdict (if applicable).



## 10. EVIDENCE OF CONFORMANCE

### 10.1. Demonstration of Conformance (DOC)

This section lists the sources of evidence which may be considered during an audit to establish conformance against GECA's standards. This list is provided in order to guide the applicant manufacturer through the requirements of the standard and to facilitate the preparation of an application.

The DoC requirements as specified along with each criterion in the standard define specific sources of evidence acceptable to GECA. In cases where criteria offer several DoC requirements, it is the sole decision of the appointed auditing body to choose the appropriate option in course of the preliminary stage of the assessment. If none of the recommended DoC requirements stipulated for a particular criterion in the standard is applicable for a product under assessment, then the appointed auditing body may choose an alternative but equivalent source of evidence. In cases where alternative sources of evidence have been accepted for the verification of the product, the auditing body will inform GECA by providing a report on the details as far as appropriate. GECA will use this information to continuously improve the DoC requirements stipulated by that standard.

The DoC requirements are summarised in Appendix A to assist applicants in preparing documentation for the verification process with a GECA Designated Auditor.

## APPENDIX A ENERGY CONVERSION TABLE

Production Stage				
Quantity of product (tonnes):				
Equals to surface area of final product (m2):				
Fuel	Quantity	Units	Conversion Factor (MJ/kg)	Energy (MJ)
Natural gas		kg	54.1	
Natural gas		Nm <sup>3</sup>	38.8 MJ/Nm <sup>3</sup>	
Propane		kg	50	
Butane		kg	49.3	
Kerosene		kg	46.5	
Gasoline		kg	52.7	
Diesel		kg	44.6	
Gas oil		kg	45.2	
Heavy fuel oil		kg	42.7	
Dry steam coal		kg	30.6	
Anthracite		kg	29.7	
Charcoal		kg	33.7	
Industrial coke		kg	27.9	
Electricity		kWh	3.6	
Total energy use				
Consumption per tonne of product ( MJ/t ):				
Consumption per square meter of finished product ( MJ/m2):				





## APPENDIX B APPLICATION CHECKLIST

The Application Checklist guides the applicant through the application and verification process. An applicant may collect all information that are required for the verification of the product and attach the relevant documents to their application. The table below summarises the DoC requirements for each criterion in the standard.

Criterion No.	Criterion Content	Demonstration of Conformance See standard body for details	Evidence Attached	Complies Y/N or NA
<b>1. Standard Category Scope</b>				
	Standard category scope	Detailed description of the product (range)	<input type="checkbox"/>	<input type="checkbox"/>
		Detailed signed description of clone products	<input type="checkbox"/>	
		Explanation of applicability to the scope of this standard	<input type="checkbox"/>	
<b>2. Fitness For Purpose</b>				
Criterion 2.	Applicable standards and demonstrated fitness As a minimum the product must be rated as <b>Contract Heavy Duty</b> or <b>Residential Heavy Duty</b>	Documentation from ACCS or equivalent carpet classification scheme or	<input type="checkbox"/>	<input type="checkbox"/>
		Test report confirming safety/quality of product	<input type="checkbox"/>	
Criterion 3.	Colour-fastness warranty	Copy of warranty documents provided to customers.	<input type="checkbox"/>	<input type="checkbox"/>
<b>3. Design For Environment</b>				
Criterion 4.	Carpet cleaners must be prohibited from use on product	Signed declaration confirming conformance to criterion	<input type="checkbox"/>	<input type="checkbox"/>
Criterion 5.	Replacement or rotation offer for worn carpet tiles	Copy of offer to consumer and details of the supplier	<input type="checkbox"/>	<input type="checkbox"/>
		Signed declaration confirming conformance to criterion	<input type="checkbox"/>	
Criterion 6.	Easy disassembly of product into recyclable or re-useable units (only two DoCs required)	Instruction for disassembly or	<input type="checkbox"/>	<input type="checkbox"/>
		Engineer's report on disassembly and	<input type="checkbox"/>	
		Details of materials used in the product	<input type="checkbox"/>	
Criterion 7.	a) Collection of material efficiency data	Engineers report with product specification details	<input type="checkbox"/>	<input type="checkbox"/>
	b) Evidence of research or improvements	Chain of custody evidence and contractor receipts for recycled material content	<input type="checkbox"/>	
	c) Production process			



4. Raw Material				
Criterion 8.	Fibre must not be chemically bleached	Signed declaration confirming conformance to criterion by the yarn supplier	<input type="checkbox"/>	<input type="checkbox"/>
		Relevant product specifications	<input type="checkbox"/>	
Criterion 9.	Scouring surfactants must be aerobically biodegradable	Test reports confirming conformance to the criterion	<input type="checkbox"/>	<input type="checkbox"/>
Criterion 10.	Spinning lubricant must not exceed set limits	Documentation of production methods and chemical formulations	<input type="checkbox"/>	<input type="checkbox"/>
Criterion 11.	Primary effluent from wool scours must be treated (only two DoCs required)	<b>Mandatory:</b> Signed declaration confirming conformance to criterion and	<input type="checkbox"/>	<input type="checkbox"/>
		Documentation of waste water discharge to appropriate sewerage plants or	<input type="checkbox"/>	
		Process diagrams water quality retails of contained treatment systems	<input type="checkbox"/>	
Criterion 12.	Rinse water discharge must not raise the receiving body's BOD by more than 2.5 mg/l (only one DoC required at minimum)	Trade Water Discharge Permit or equivalent documents or	<input type="checkbox"/>	<input type="checkbox"/>
		Test reports and calculations on the BOD <sub>5</sub> level	<input type="checkbox"/>	
Criterion 13.	Wool grease content in primary effluent must not exceed 40 kg/tonne of greasy wool scoured	Calculations of wool grease content in primary effluent	<input type="checkbox"/>	<input type="checkbox"/>
		Documentation supporting calculations for wool greasing production methods	<input type="checkbox"/>	
Criterion 14.	Total water intake by wool scours must not exceed 30 000 l/tonne of greasy wool	12 month average of water intake per tonne of greasy wool scoured	<input type="checkbox"/>	<input type="checkbox"/>
		Documentation supporting calculations for water intake	<input type="checkbox"/>	
Criterion 15.	Total energy of wool scours must not exceed 40 GJ/tonne of greasy wool	Outline of energy usage including boundaries of calculations and indication of the most energy intensive step	<input type="checkbox"/>	<input type="checkbox"/>
Criterion 16.	Annual air emission from polyamide and polypropylene fibres must not exceed set limits	Calculations and supporting documents from fibre manufacturers on relevant annual air emissions.	<input type="checkbox"/>	<input type="checkbox"/>
Criterion 17.	Average annual air emissions of VOCs from polyester production must exceed 1.2 g/kg of fibre		<input type="checkbox"/>	<input type="checkbox"/>
Criterion 18.	Average annual air emission of acrylonitrile must not exceed 1 g/kg of fibre		<input type="checkbox"/>	<input type="checkbox"/>



Criterion 19.	Residual acrylonitrile must be less than 1.5 mg/kg of fibre	Test reports confirming conformance to the criterion	<input type="checkbox"/>	<input type="checkbox"/>
Criterion 20.	Plastic and foam must not contain prohibited substances	Signed declaration confirming conformance to criterion and	<input type="checkbox"/>	<input type="checkbox"/>
		List of chemicals used in padding or backing material or	<input type="checkbox"/>	
Criterion 21.	Residual 1,3-butadiene in latex rubber or foam must be less than 1 mg/kg of product	Test report confirming the conformance to the criterion	<input type="checkbox"/>	<input type="checkbox"/>
Criterion 22.	Petrochemical suppliers must comply with appropriate Environmental Legislations	Signed declaration confirming conformance to the criterion by the petrochemical supplier	<input type="checkbox"/>	<input type="checkbox"/>
Criterion 23.	All rubber must meet the standards of GECA-03: Recycled Rubber Products (only one DoC required)	Evidence of GECA certification or	<input type="checkbox"/>	<input type="checkbox"/>
		Evidence of how the contaminants in recycled material are bound in the final product	<input type="checkbox"/>	
Criterion 24.	Total water discharge from foam or rubber production must be treated to reduce COD/TOC levels by 90%	Test reports and calculations on COD or TOC levels in water effluent	<input type="checkbox"/>	<input type="checkbox"/>
Criterion 25.	Adhesives recommended for the installation of certified products must be pressure sensitive, low VOC and contain no hazardous materials as defined by this criterion	Technical specifications of the adhesive Adhesives certified to GECA 01-2007 Adhesives standard are compliant with this criterion	<input type="checkbox"/>	<input type="checkbox"/>
<b>5. Hazardous Materials</b>				
Criterion 26.	Listed prohibited substances must not be in certified products or used in their production	Schedule of constituent chemicals	<input type="checkbox"/>	<input type="checkbox"/>
		Documentation clearly outlining how each chemical is used, managed and stored	<input type="checkbox"/>	
		Where an exemption is claimed, a signed declaration from an Executive Director	<input type="checkbox"/>	
		For potentially explosive chemicals, the applicant must also provide details of the ISO 14001 EMS in place	<input type="checkbox"/>	
Criterion 27.	Listed prohibited substances, their derivatives or in-situ precursors must not be used during production or added to finished products	A schedule of the constituent chemical substances	<input type="checkbox"/>	<input type="checkbox"/>
		signed declaration from an Executive Director of the applicant company	<input type="checkbox"/>	
Criterion 28.	After-chroming techniques must not be used in the dyeing/colouring of fibres	MSDS of stain blockers and NATA test results on final concentration in carpet	<input type="checkbox"/>	<input type="checkbox"/>



	and sulphonated phenolic stainblockers must be in concentrations $\leq 1\text{g/m}^2$	Signed declaration confirming conformance to criterion	<input type="checkbox"/>	
Criterion 29.	Dyes must not contain mutagenic, toxic or carcinogenic substances	MSDSs of all dyes used in product	<input type="checkbox"/>	<input type="checkbox"/>
		Signed declaration confirming conformance to criterion	<input type="checkbox"/>	
Criterion 30.	Azo dyes must not cleave into carcinogenic aromatic amines	Signed declaration confirming conformance to criterion	<input type="checkbox"/>	<input type="checkbox"/>
Criterion 31.	COD levels of dye house effluent must not exceed 35 kg/tonne of fibre	Test reports confirming conformance to the criterion	<input type="checkbox"/>	<input type="checkbox"/>
Criterion 32.	Dye house effluent must not contain more than 3 ppm chromium	A test report from one of the stated test methods	<input type="checkbox"/>	<input type="checkbox"/>
Criterion 33.	Listed flame retardants must not be used in certified products (only one DoC required at minimum)	Signed declaration stating flame retardants are not used in product or	<input type="checkbox"/>	<input type="checkbox"/>
		Documentation of flame retardant chemicals used and relevant MSDSs	<input type="checkbox"/>	
Criterion 34.	Boron compounds must be bound directly into the fibre (only one DoC required)	Signed declaration confirming conformance to criterion or	<input type="checkbox"/>	<input type="checkbox"/>
		Signed declaration stating boron based flame retardants are not used in product(s)	<input type="checkbox"/>	
Criterion 35.	Antimony oxide compounds must be bound directly into the fibre (only one DoC required)	Signed declaration confirming conformance to criterion or	<input type="checkbox"/>	<input type="checkbox"/>
		Signed declaration stating antimony oxide based flame retardants are not used in product(s)	<input type="checkbox"/>	
Criterion 36.	Insect resistant agents must not be applied during opening, carding or spinning operations	Signed declaration confirming conformance to criterion	<input type="checkbox"/>	<input type="checkbox"/>
Criterion 37.	Natural material must not be treated or impregnated with fungicides or insecticides classified as Type1 or 2A carcinogens	MSDS of fungicides and insecticides used	<input type="checkbox"/>	<input type="checkbox"/>
Criterion 38.	Synthetic pyrethroids must not used during the scouring process	Signed declaration confirming conformance to criterion	<input type="checkbox"/>	<input type="checkbox"/>
Criterion 39.	Moth and carpet beetle treatment of animal fibres must meet the requirements of stated classification schemes (only one DoC required at minimum)	Certification evidence to appropriate classification schemes or	<input type="checkbox"/>	<input type="checkbox"/>
		Test reports and signed declaration confirming conformance to the criterion	<input type="checkbox"/>	
Criterion 40.	Permethrin and bifenthrin levels in the total factory effluent must not exceed the stated limits	Test reports, calculations and supporting documents confirming conformance to the criterion	<input type="checkbox"/>	<input type="checkbox"/>
Criterion 41.	Wool fibre biocides must not exceed	Signed declaration stating listed wool biocides are not used in product(s)	<input type="checkbox"/>	<input type="checkbox"/>



	the limits stated in Table 3. (only one DoC required at minimum)	with supporting documentation or		
		Documentation from wool supplier on the levels of biocides used and procedure process	<input type="checkbox"/>	
<b>6. Water, Energy &amp; Emissions</b>				
Criterion 42.	Reduced water consumption measures must be in place	Documentation of water minimisation procedures	<input type="checkbox"/>	<input type="checkbox"/>
Criterion 43.	Energy Documentation	Completed Energy Conversion Table	<input type="checkbox"/>	<input type="checkbox"/>
		Spreadsheets or flowcharts outlining energy usage throughout production process	<input type="checkbox"/>	
		Signed declaration confirming all energy usage has been disclosed	<input type="checkbox"/>	
Criterion 44.	Total VOC emissions must not exceed 0.5 mg/m <sup>2</sup> /hr and emissions of 4-phenylcyclohexene cannot exceed 0.05 mg/m <sup>2</sup> /hr.	Test report confirming conformance to the criterion	<input type="checkbox"/>	<input type="checkbox"/>
		Confirmation from laboratory that appropriate treatment of samples were undertaken in accordance to ASTM requirements	<input type="checkbox"/>	
		Copy of laboratory instructions for to preparation for delivery to the laboratory	<input type="checkbox"/>	
<b>7. Waste, Packaging &amp; Production Stewardship</b>				
Criterion 45.	Documentation of material flows	Spreadsheet or flow diagram of material flows	<input type="checkbox"/>	<input type="checkbox"/>
		Waster production records	<input type="checkbox"/>	
Criterion 46.	Waste minimisation policy	Copies of waste minimisation policy	<input type="checkbox"/>	<input type="checkbox"/>
Criterion 47.	Products must either be able to be returned back to the applicant, accepted by a local recycler or a Product Stewardship Program must be in place	Copy of instructions outlining the take back service and	<input type="checkbox"/>	<input type="checkbox"/>
		Copies of contractual agreements allowing for the proper disposal of used products	<input type="checkbox"/>	
Criterion 48.	Products must be accompanied by the specified information (only two DoCs required at minimum)	Mandatory: Copies of the relevant care/maintenance instructions and	<input type="checkbox"/>	<input type="checkbox"/>
		Sample of product packaging or	<input type="checkbox"/>	
		Visual inspection of product packaging during site visit	<input type="checkbox"/>	
Criterion 49.	Halogenated plastics must not be used in product packaging	Ingredients list for plastic packing material	<input type="checkbox"/>	<input type="checkbox"/>



Criterion 50.	Packaging material must be accepted by local recycling plants	Signed declaration confirming conformance to the criterion	<input type="checkbox"/>	<input type="checkbox"/>
<b>8. Environmental Claims</b>				
Criterion 51.	Environmental claims outside the scope of this standard must comply with ISO 14021	Independent report confirming conformance to the criterion	<input type="checkbox"/>	<input type="checkbox"/>
		Signed declaration confirming conformance to the criterion	<input type="checkbox"/>	
<b>9. Social and Legal Compliance</b>				
Criterion 52.	Compliance with Environmental Legislation	Signed declaration confirming conformance to the criterion and	<input type="checkbox"/>	<input type="checkbox"/>
		Permits granted by EPA or an equivalent national body (if applicable)	<input type="checkbox"/>	
		Evidence of corrective action (if applicable)	<input type="checkbox"/>	
Criterion 53.	Fair Pay	Signed declaration confirming conformance to the criterion and	<input type="checkbox"/>	<input type="checkbox"/>
		Sample workplace agreement, Payslips	<input type="checkbox"/>	
Criterion 54.	General compliance to OH&S regulations	Signed declaration confirming conformance to the criterion and	<input type="checkbox"/>	<input type="checkbox"/>
		OH&S policies and procedures and	<input type="checkbox"/>	
		Evidence of corrective action (if applicable)	<input type="checkbox"/>	
Criterion 55.	Equal Opportunity	Signed declaration confirming conformance to the criterion and	<input type="checkbox"/>	<input type="checkbox"/>
		Relevant policies and procedures and	<input type="checkbox"/>	
		Evidence of corrective action (if applicable)	<input type="checkbox"/>	
Criterion 56.	Lawful Conduct	Signed declaration confirming conformance to the criterion and	<input type="checkbox"/>	<input type="checkbox"/>
		Evidence of corrective action (if applicable)	<input type="checkbox"/>	