PRODUCT INFORMATION	**TYPE OF PRODUCT**	Metal Roofing and Gutters
	COMPANY NAME	Englert
	PRODUCT/COLLECTION NAME	n/a
	DESCRIPTION	Englert manufactures metal roofing, gutters, solar energy systems, rainwater harvesting systems and energy monitoring systems
MATERIAL FEEDSTOCK	**MATERIAL CONTENT**	• Recycled steel • Aluminum • standard coatings that are LEED compliant, see below
	RECYCLED CONTENT %	High recycled content, made from recycled steel and aluminum material 3105 Aluminum Sheet: 99% Recycled, (80% post, 20% pre-consumer) Steel: 25%-35% Recycled (80% post, 20% pre-consumer)
	RAPIDLY RENEWABLE CONTENT %	None
	HARMFUL ADDITIVES	Galvalume: Contains: Aluminum (CAS 7429-90-5), Carbon (CAS 7440-44-0), Iron (CAS 7439-89-6), Manganese (CAS 7439-96-5), Silicon (CAS 7440-21-3) and Zinc (CAS 7440-66-6) - ***Hazards***: particularly during welding, burning, cutting, grinding and machining activities. Long-term excessive exposure to the fume or dust may cause respiratory system effects. Inhalation of metal dust and fume may result from further processing of the material by the user Geocel - 2300 Clear Sealant – Chemical ingredient is Aromatic Hydrocarbon - **(VOC):** <350 g/l - **EXPOSURE CONTROLS / PERSONAL PROTECTION PERSONAL PROTECTIVE EQUIPMENT** **EYES AND FACE:** Wear safety glasses with side shields or goggles when handling this material. **SKIN:** Chemical resistant protective gloves are recommended. **RESPIRATORY:** Not required with adequate ventilation. **WORK HYGIENIC PRACTICES:** Wash hands thoroughly after each use, especially before eating or smoking. Good personal hygiene practices should always be followed. **Englert MetalMan HT Part #070501 – Elastomeric bitumen waterproofing membrane - WARNING! This product may contain substances known by the State of California that could cause cancer (asphalt, crystalline silica, fiberglass, antimony trioxide)** **Due to the product form, exposure to hazardous dusts or fumes is not expected to occur. Information on carcinogenicity is given for reference only. This product is not classifiable as a carcinogen.** ***Asphalt:*** The International Agency for Research on Cancer (IARC) has concluded that this product is not classifiable as to its carcinogenicity to humans. Epidemiological studies of roofers have generally demonstrated an excess of lung cancer in these workers. However, it is unclear to what extent these cancers may be attributable to asphalt exposures during roofing operations, since in the past, roofers have been exposed to coal tar and asbestos, which are known human lung carcinogens. Although strong epidemiological evidence exists of an association between lung cancer and working as a roofer, it is uncertain whether exposure to asphalt is related to this association. Trace amounts of polynuclear aromatic hydrocarbons (PAHs) may be present in some asphalts and can be released upon excessive heating. Some of these PAHs have been identified as having the potential to induce carcinogenic and reproductive health effects. (2) ***Crystalline Silica:***

		Breathable crystalline silica from sand is not expected to be released, sand is adhered to product. Crystalline silica is considered a hazard by inhalation. The International Agency for Research on Cancer (IARC) classified crystalline silica in quartz form coming from professional exposure carcinogenic for human (Group 1). (3) ***Fiberglass Filament:*** Fiberglass is not expected to be released. In October 2001, IARC classified fiberglass as Group 3 "not classifiable as to its carcinogenicity to humans". The 2001 decision was based on current human and animal research that shows no association between inhalation exposure to dust from fiberglass wool and the development of respiratory disease. This is a reversal of the IARC finding in 1987 of a Group 2B designation (possibly carcinogenic to humans) based on earlier studies in which animals were injected with large quantities of fiberglass. NTP and ACGIH have not yet reviewed the IARC reclassification or the most current fiberglass health research. At this time, both agencies continue to classify glass wool based on the earlier animal injection studies. ***Decabromodiphenyl Oxide:*** Decabromodiphenyl oxide has been classified as a Group 3 by IARC. An IARC Group 3 exhibits limited evidence for carcinogenicity in experimental animals and no human data. NTP has evaluated decabromodiphenyl oxide and has not listed it as a carcinogen. (1) ***Antimony Trioxide:*** The International Agency for Research on Cancer (IARC) classified this product as possibly carcinogenic to humans (Group 2B). An IARC class 2B material exhibits sufficient evidence in animal tests. (1) ***No information available about the other products.*** • PAINTED ALUMINUM COILED SHEET **Hazardous Components (Chemical Name) CAS # Percentage** **Aluminum** 7429-90-5 96% Magnesium 7429-90-5 2% Manganese 7439-96-5 2% **Signs and Symptoms Of Exposure** ACUTE: INHALATION: NOT LIKELY UNLESS MATERIAL MACHINED, WELDED OR REMELTED. SHORT TERM OVEREXPOSURE TO WELDING FUMES MAY RESULT IN DISCOMFORT SUCH AS DIZZINESS, NAUSEA, OR DRYNESS OR IRRITATION OF THROAT AND NOSE. INGESTION: NOT LIKELY. SKIN: NOT LIKELY. EYES: MAY IRRITATE EYES WHEN WELDING OR PLASMA CUTTING. SHORT TERM OVEREXPOSURE TO SOLVENT FUMES MAY OCCUR. **Hazardous Polymerization:** Will not occur
	HARMFUL EMISSIONS	See Additives
	EMISSION STRENGTH OVER TIME	n/a
	TREATMENTS	Their in-house paint line is the most environmentally advanced paint line in the industry, surpassing stringent state and federal environmental standards for metal coating. This reduces onsite environmental impact.
MANUFACTURING	**MANUFACTURING PROCESS**	They have systems in place to re-use the heat from the baking of the material. They have monitors that capture 100% of solvent fumes from painting drying & curing operations, recovering virtually all of the heat from the burning solvent for return to the process making this an ultra clean sustainable system that is non-polluting and conserves a substantial amount of energy.
	HARMFUL EMISSIONS	See above
	LOCATION OF MANUF. PLANT	They have a manufacturing facility in NJ but they also offer an onsite roofing panel machine that is available for the product to be custom made onsite.
	TESTS/CODES	Englert metal roofing products comply with some of the most stringent testing requirements in the country and many meet or exceed the metal roofing wind uplift requirements of the Miami Dade and Florida Building Departments, and are FM-approved for fire resistance. Their products have excelled in rigorous, controlled performance testing, including UL®, FM®, ASTM, Florida Building Code, Miami Dade and ICC®. See below for more info.
	3RD PARTY CERTIFICATION	U.S. Green Building Council
INSTALLATION	**INSTALLATION PROCEDURE**	Englert provides installation instructions for their products. They have an

		onsite roofing panel machine that is available for the product to be manufactured onsite.
	INSTALLATION ADHESIVES	n/a
	UNIT COST	Varies per product and installation
	LIFE CYCLE ANALYSIS EXTRACTION	Highly energy efficient and recyclable at end of life, lighter colors add to reducing heat island effect, long lasting, recyclable
	END OF SERVICE LIFE	100% recyclable
MISC. PROPERTIES	**QUALITIES/PROPERTIES OF PRODUCT**	50+ year lifespan, Very high durability, Englert metal roofing products comply with some of the most stringent testing requirements in the country and many meet or exceed the metal roofing wind uplift requirements of the Miami Dade and Florida Building Departments, and are FM-approved for fire resistance. Their products have excelled in rigorous, controlled performance testing, including UL®, FM®, ASTM, Florida Building Code, Miami Dade and ICC®.
	MISC. COMMENTS	Rolls are wrapped to ship in recyclable plastic. They offer Ultra – Cool metal Roofing systems, solar energy systems, rain water harvesting, and energy monitoring systems Limited warranties up to 25 years
	CONTRIBUTION TO LEED POINTS	A Metal Roof can help earn up to 25 U.S. Green Building Council LEED credits LEED compliance across its entire line of paint choices LEED Credit 7.2 The Roof has an SRI of 45.6 and is LEED approved, the clear panels are made by Kalwall and “the Kalwall panel meets SRI requirements listed in ASTM E1980, ASTM E408 and ASTM E903 to reduce Heat Island Effect for roofs.” 12 LEED credits available for energy savings, recycling and water conservation All of Englert's ULTRA-Cool coatings meet Energy Star® and LEED™ Version 3.0 requirements for reflectivity and emissivity, their ULTRA-Cool™ low-gloss coatings are standard for all colors, helping reduce energy bills up to 50%. Each of Englert’s metal roofing materials can earn up to six LEED credits for recyclability, regional material sourcing, and building reuse.
COMPANY PROFILE	**GREEN PHILOSOPHY**	Today Englert Environmental is a leading provider of renewable energy solutions where metal roofing and gutters systems play a critical role in collecting solar energy and harvesting rainwater. Englert provides world leading, best-of-breed technology, products and services.
	CONTACT	1-800-ENGLERT (1-800-364-5378) info@englertinc.com 1200 Amboy AvenuePerth Amboy, New Jersey 08861 Charity (865)696-7968
MAINTENANCE	**AFTER INSTALLATION**	Minimal maintenance requirements