CONCRETE REINFORCING BAR/REBAR & MERCHANT BAR QUALITY by ArcelorMittal Long Products Canada

Health Product Declaration v2.1

created via: HPDC Online Builder

CLASSIFICATION: 03 21 00

PRODUCT DESCRIPTION: This HPD covers the following two products from ArcelorMittal Long Products Canada, CONCRETE REINFORCING BAR / REBAR and Merchant Bar Quality (MBQ). CONCRETE REINFORCING BAR / REBAR : Rebar is the foundation that provides tensile strength to concrete, which is why the official name is concrete reinforcing bar. It is a essential part of roads, buildings and infrastructures around the world. Concrete is a material that is very strong in compression, but relatively weak in tension. To compensate for this imbalance in concrete's behavior, rebar is cast into it to carry the tensile loads. MERCHANT BAR QUALITY: Merchant Bar Quality steel (MBQ) is specified when standard steel quality for non-critical applications is needed. These types of bars are generally used in structural type applications involving bending, forming, punching and welding. Merchant Bars are used by fabricators and manufacturers to produce a wide variety of products including steel frames and structures, brackets, steel floor and roof joists, walkways, ornamental furniture, railings, and more.

Section 1: Summary — Basic Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format
- ○ Nested Materials Method
- ◉ Basic Method

Threshold Disclosed Per
- ○ Material
- ◉ Product

Threshold level
- ◉ 100 ppm
- ○ 1,000 ppm
- ○ Per GHS SDS
- ○ Per OSHA MSDS
- ○ Other

Residuals/Impurities
- ◉ Considered
- ○ Partially Considered
- ○ Not Considered

Explanation(s) provided for Residuals/Impurities?
- ◉ Yes ○ No

Are All Substances Above the Threshold Indicated:

Characterized ◉ Yes ○ No
Percent Weight and Role Provided?

Screened ◉ Yes ○ No
Using Priority Hazard Lists with Results Disclosed?

Identified ◉ Yes ○ No
Name and Identifier Provided?

CONTENT IN DESCENDING ORDER OF QUANTITY

Summary of product contents and results from screening individual chemical substances against HPD Priority Hazard Lists and the GreenScreen for Safer Chemicals®. The HPD does not assess whether using or handling this product will expose individuals to its chemical substances or any health risk. Refer to Section 2 for further details.

MATERIAL | SUBSTANCE | *RESIDUAL OR IMPURITY* GREENSCREEN SCORE | HAZARD TYPE

CONCRETE REINFORCING BAR/REBAR & MERCHANT BAR QUALITY [
IRON LT-P1 | END CARBON LT-UNK *PHOSPHORUS* BM-2 | PHY | MAM MANGANESE LT-P1 | END | MUL | REP *SULFUR* LT-UNK | SKI SILICON LT-UNK COPPER LT-UNK NICKEL NoGS CHROMIUM LT-P1 | RES | END | SKI MOLYBDENUM LT-UNK VANADIUM LT-1 | MUL | CAN | GEN NIOBIUM LT-UNK *NITROGEN* NoGS *TIN* LT-UNK *TITANIUM* LT-UNK *BORON* LT-UNK *CALCIUM* LT-P1 | PHY *LEAD* LT-1 | DEL | CAN | PBT | REP | MUL | END | GEN *ARSENIC* LT-1 | DEL | CAN | PBT | AQU | MAM | END | MUL | GEN *COBALT* LT-1 | RES | CAN | SKI | MUL | GEN | REP *ANTIMONY* LT-1 | AQU | CAN]

Number of Greenscreen BM-4/BM3 contents ... 0

Contents highest concern GreenScreen Benchmark or List translator Score ... LT-1

Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

This HPD has been prepared using a Basic Inventory method with a product threshold of 100 ppm. The content inventory includes ranges to encompass both products by ArcelorMittal Long Products Canada: concrete reinforcing bars (rebars) and merchant bar quality (MBQ). Both steel products made by ArcelorMittal Long Products Canada contain materials with Special Conditions (metal alloy ingredients) as per the HPDC. Guidelines for reporting Special Conditions materials are still under development by HPDC. ArcelorMittal Long Products Canada will update the HPD accordingly once these guidelines get published. Substances present in rebars and MBQ products, as well as known residuals and impurities, have been disclosed at 100 ppm. Additional details about how residuals and impurities were considered are available in the appropriate section.

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

VOC Content data is not applicable for this product category.

CERTIFICATIONS AND COMPLIANCE *See Section 3 for additional listings.*

VOC emissions: Inherently non- emitting source per LEED®

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Material Ingredients, Option 1

Third Party Verified?

- ○ Yes
- ◉ No

PREPARER: Self-Prepared
VERIFIER:
VERIFICATION #:

SCREENING DATE: 2018-09-18
PUBLISHED DATE:
EXPIRY DATE: 2021-09-18

Section 2: Content in Descending Order of Quantity

This section lists contents in a product based on specific threshold(s) and reports detailed health information including hazards. This HPD uses the inventory method indicated above, which is one of three possible methods:

- *Basic Inventory method with Product-level threshold.*
- *Nested Material Inventory method with Product-level threshold*
- *Nested Material Inventory method with individual Material-level thresholds*

Definitions and requirements for the three inventory methods and requirements for each data field can be found in the HPD Open Standard version 2.1, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-1-standard

CONCRETE REINFORCING BAR/REBAR & MERCHANT BAR QUALITY

PRODUCT THRESHOLD: 100 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Yes

RESIDUALS AND IMPURITIES NOTES: No residuals are present in the final product, however all known impurities above 100 ppm have been disclosed in the content inventory as such. Those impurities are essentially introduced in rebar and MBQ products through recycled scrap metals. The type and quantity of impurities are determined by ArcelorMittal Long Products Canada through chemical testing of production samples.

OTHER PRODUCT NOTES: Concrete Reinforcing bars and Merchant Bar Quality contains 5.2% and 7.11% of pre-consumer recycled content respectively, as well as 23.4% and 20.5% of post-consumer recycled content respectively.

IRON

ID: 7439-89-6

%: 90.0000 - 99.0000 GS: LT-P1 RC: None NANO: No ROLE: Based material for steel

HAZARDS:	AGENCY(IES) WITH WARNINGS:	
ENDOCRINE	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor

SUBSTANCE NOTES: See other material notes

CARBON

ID: 7440-44-0

%: 0.0000 - 0.4000 GS: LT-UNK RC: None NANO: No ROLE: Based material for steel

HAZARDS:	AGENCY(IES) WITH WARNINGS:	
None Found	No warnings found on HPD Priority lists	

SUBSTANCE NOTES: See other material notes

PHOSPHORUS

ID: 7723-14-0

%: Impurity/Residual GS: BM-2 RC: None NANO: No ROLE: Impurity/Residual

HAZARDS:	AGENCY(IES) WITH WARNINGS:	
PHYSICAL HAZARD (REACTIVE)	EU - GHS (H-Statements)	H228 - Flammable solid
MAMMALIAN	US EPA - EPCRA Extremely Hazardous	Extremely Hazardous Substances

Substances

SUBSTANCE NOTES: See other material notes

MANGANESE

ID: 7439-96-5

%: 0.0000 - 1.6500 GS: LT-P1 RC: None NANO: No ROLE: Alloy

HAZARDS:	AGENCY(IES) WITH WARNINGS:	
ENDOCRINE	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
MULTIPLE	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
REPRODUCTIVE	Japan - GHS	Toxic to reproduction - Category 1B

SUBSTANCE NOTES: See other material notes

SULFUR

ID: 7704-34-9

%: Impurity/Residual GS: LT-UNK RC: None NANO: No ROLE: Impurity/Residual

HAZARDS:	AGENCY(IES) WITH WARNINGS:	
SKIN IRRITATION	EU - GHS (H-Statements)	H315 - Causes skin irritation

SUBSTANCE NOTES: See other material notes

SILICON

ID: 7440-21-3

%: 0.0000 - 0.5000 GS: LT-UNK RC: None NANO: No ROLE: Alloy

HAZARDS:	AGENCY(IES) WITH WARNINGS:
None Found	No warnings found on HPD Priority lists

SUBSTANCE NOTES: See other material notes

COPPER

ID: 7440-50-8

%: 0.0000 - 0.8000 GS: LT-UNK RC: None NANO: No ROLE: Alloy

HAZARDS:	AGENCY(IES) WITH WARNINGS:
None Found	No warnings found on HPD Priority lists

SUBSTANCE NOTES: See other material notes

NICKEL

ID: 8049-31-8

%: 0.0000 - 0.3000 GS: NoGS RC: None NANO: No ROLE: Alloy

HAZARDS:	AGENCY(IES) WITH WARNINGS:
None Found	No warnings found on HPD Priority lists

SUBSTANCE NOTES: See other material notes

CHROMIUM

ID: 7440-47-3

%: 0.0000 - 0.3500 GS: LT-P1 RC: None NANO: No ROLE: Alloy

HAZARDS:	AGENCY(IES) WITH WARNINGS:	
RESPIRATORY	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced
ENDOCRINE	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
SKIN SENSITIZE	MAK	Sensitizing Substance Sh - Danger of skin sensitization

SUBSTANCE NOTES: See other material notes

MOLYBDENUM

ID: 7439-98-7

%: 0.0000 - 0.3000 GS: LT-UNK RC: None NANO: No ROLE: Alloy

HAZARDS:	AGENCY(IES) WITH WARNINGS:
None Found	No warnings found on HPD Priority lists

SUBSTANCE NOTES: See other material notes

VANADIUM

ID: 7440-62-2

%: 0.0000 - 0.1000 GS: LT-1 RC: None NANO: No ROLE: Alloy

HAZARDS:	AGENCY(IES) WITH WARNINGS:	
MULTIPLE	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
CANCER	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man
GENE MUTATION	MAK	Germ Cell Mutagen 2

SUBSTANCE NOTES: See other material notes

NIOBIUM

ID: 7440-03-1

%: 0.0000 - 0.1000 GS: LT-UNK RC: None NANO: No ROLE: Alloy

HAZARDS:	AGENCY(IES) WITH WARNINGS:
None Found	No warnings found on HPD Priority lists

SUBSTANCE NOTES: See other material notes

NITROGEN

ID: 7727-37-9

%: Impurity/Residual GS: NoGS RC: None NANO: No ROLE: Impurity/Residual

HAZARDS:	AGENCY(IES) WITH WARNINGS:
None Found	No warnings found on HPD Priority lists

SUBSTANCE NOTES: See other material notes

TIN

ID: 7440-31-5

%: Impurity/Residual GS: LT-UNK RC: None NANO: No ROLE: Impurity/Residual

HAZARDS:	AGENCY(IES) WITH WARNINGS:
None Found	No warnings found on HPD Priority lists

SUBSTANCE NOTES: See other material notes

TITANIUM

ID: 7440-32-6

%: Impurity/Residual GS: LT-UNK RC: None NANO: No ROLE: Impurity/Residual

HAZARDS:	AGENCY(IES) WITH WARNINGS:
None Found	No warnings found on HPD Priority lists

SUBSTANCE NOTES: See other material notes

BORON

ID: 7440-42-8

%: Impurity/Residual GS: LT-UNK RC: None NANO: No ROLE: Impurity/Residual

HAZARDS:	AGENCY(IES) WITH WARNINGS:
None Found	No warnings found on HPD Priority lists

SUBSTANCE NOTES: See other material notes

CALCIUM

ID: 7440-70-2

%: **Impurity/Residual** GS: **LT-P1** RC: **None** NANO: **No** ROLE: **Impurity/Residual**

HAZARDS:	AGENCY(IES) WITH WARNINGS:	
PHYSICAL HAZARD (REACTIVE)	EU - GHS (H-Statements)	H261 - In contact with water releases flammable gases

SUBSTANCE NOTES: See other material notes

LEAD

ID: 7439-92-1

%: **Impurity/Residual** GS: **LT-1** RC: **None** NANO: **No** ROLE: **Impurity/Residual**

HAZARDS:	AGENCY(IES) WITH WARNINGS:	
DEVELOPMENTAL	G&L - Neurotoxic Chemicals	Developmental Neurotoxicant
CANCER	US EPA - IRIS Carcinogens	(1986) Group B2 - Probable human Carcinogen
CANCER	IARC	Group 2a - Agent is probably Carcinogenic to humans
CANCER	IARC	Group 2b - Possibly carcinogenic to humans
CANCER	CA EPA - Prop 65	Carcinogen
DEVELOPMENTAL	CA EPA - Prop 65	Developmental toxicity
PBT	US EPA - Priority PBTs (NWMP)	Priority PBT
PBT	WA DoE - PBT	PBT
REPRODUCTIVE	CA EPA - Prop 65	Reproductive Toxicity - Female
REPRODUCTIVE	CA EPA - Prop 65	Reproductive Toxicity - Male
CANCER	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
PBT	US EPA - Toxics Release Inventory PBTs	PBT
REPRODUCTIVE	EU - SVHC Authorisation List	Toxic to reproduction - Candidate list
PBT	OSPAR - Priority PBTs & EDs & equivalent concern	PBT - Chemical for Priority Action
PBT	OR DEQ - Priority Persistent Pollutants	Priority Persistent Pollutant - Tier 1
DEVELOPMENTAL	US NIH - Reproductive & Developmental Monographs	Clear Evidence of Adverse Effects - Developmental Toxicity
REPRODUCTIVE	US NIH - Reproductive & Developmental Monographs	Clear Evidence of Adverse Effects - Reproductive Toxicity
REPRODUCTIVE	EU - GHS (H-Statements)	H360FD - May damage fertility. May damage the unborn child
DEVELOPMENTAL	EU - GHS (H-Statements)	H362 - May cause harm to breast-fed children
REPRODUCTIVE	EU - REACH Annex XVII CMRs	Toxic to Reproduction Category 1 - Substances known to impair fertility or cause Developmental Toxicity in humans
MULTIPLE	ChemSec - SIN List	CMR - Carcinogen, Mutagen &/or Reproductive Toxicant

ENDOCRINE	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
CANCER	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man
CANCER	Korea - GHS	Carcinogenicity - Category 1 [H350 - May cause cancer]
REPRODUCTIVE	Korea - GHS	Reproductive toxicity - Category 1 [H360 - May damage fertility or the unborn child]
REPRODUCTIVE	New Zealand - GHS	6.8A - Known or presumed human reproductive or developmental toxicants
REPRODUCTIVE	Japan - GHS	Toxic to reproduction - Category 1A
GENE MUTATION	MAK	Germ Cell Mutagen 3a
REPRODUCTIVE	EU - Annex VI CMRs	Reproductive Toxicity - Category 1A
DEVELOPMENTAL	Australia - GHS	H360Df - May damage the unborn child. Suspected of damaging fertility

SUBSTANCE NOTES: See other material notes

ARSENIC

ID: 7440-38-2

%: **Impurity/Residual** GS: **LT-1** RC: **None** NANO: **No** ROLE: **Impurity/Residual**

HAZARDS:	AGENCY(IES) WITH WARNINGS:	
DEVELOPMENTAL	G&L - Neurotoxic Chemicals	Developmental Neurotoxicant
CANCER	US EPA - IRIS Carcinogens	(1986) Group A - Human Carcinogen
CANCER	IARC	Group 1 - Agent is Carcinogenic to humans
CANCER	CA EPA - Prop 65	Carcinogen
CANCER	US CDC - Occupational Carcinogens	Occupational Carcinogen
CANCER	US NIH - Report on Carcinogens	Known to be a human Carcinogen
PBT	OR DEQ - Priority Persistent Pollutants	Priority Persistent Pollutant - Tier 1
ACUTE AQUATIC	EU - GHS (H-Statements)	H400 - Very toxic to aquatic life
CHRON AQUATIC	EU - GHS (H-Statements)	H410 - Very toxic to aquatic life with long lasting effects
MAMMALIAN	EU - GHS (H-Statements)	H301 - Toxic if swallowed
MAMMALIAN	EU - GHS (H-Statements)	H331 - Toxic if inhaled
ENDOCRINE	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
MULTIPLE	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
CANCER	MAK	Carcinogen Group 1 - Substances that cause cancer in man
CANCER	Korea - GHS	Carcinogenicity - Category 1 [H350 - May cause cancer]
CANCER	New Zealand - GHS	6.7A - Known or presumed human carcinogens

CANCER	Japan - GHS	Carcinogenicity - Category 1A
GENE MUTATION	MAK	Germ Cell Mutagen 3a
CANCER	Australia - GHS	H350 - May cause cancer

SUBSTANCE NOTES: See other material notes

COBALT

ID: 7440-48-4

%: **Impurity/Residual** GS: **LT-1** RC: **None** NANO: **No** ROLE: **Impurity/Residual**

HAZARDS:	AGENCY(IES) WITH WARNINGS:	
RESPIRATORY	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced
RESPIRATORY	AOEC - Asthmagens	Asthmagen (G) - generally accepted
CANCER	IARC	Group 2b - Possibly carcinogenic to humans
CANCER	CA EPA - Prop 65	Carcinogen
CANCER	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
SKIN SENSITIZE	EU - GHS (H-Statements)	H317 - May cause an allergic skin reaction
RESPIRATORY	EU - GHS (H-Statements)	H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
MULTIPLE	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
CANCER	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man
RESPIRATORY	MAK	Sensitizing Substance Sah - Danger of airway & skin sensitization
GENE MUTATION	MAK	Germ Cell Mutagen 3a
CANCER	Australia - GHS	H350i - May cause cancer by inhalation
REPRODUCTIVE	Australia - GHS	H360F - May damage fertility

SUBSTANCE NOTES: See other material notes

ANTIMONY

ID: 7440-36-0

%: **Impurity/Residual** GS: **LT-1** RC: **None** NANO: **No** ROLE: **Impurity/Residual**

HAZARDS:	AGENCY(IES) WITH WARNINGS:	
CHRON AQUATIC	EU - GHS (H-Statements)	H411 - Toxic to aquatic life with long lasting effects
CANCER	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man

SUBSTANCE NOTES: See Material Notes

Section 3: Certifications and Compliance

This section lists applicable certification and standards compliance information for VOC emissions and VOC content. Other types of health or environmental performance testing or certifications completed for the product may be provided.

VOC EMISSIONS	Inherently non- emitting source per LEED®

CERTIFYING PARTY: Self-declared
APPLICABLE FACILITIES: All.
CERTIFICATE URL:

ISSUE DATE: 2018-09-27

EXPIRY DATE:

CERTIFIER OR LAB: -

CERTIFICATION AND COMPLIANCE NOTES: Metals as well as powder-coated metals, plated or anodized metals are inherently nonemitting sources of VOCs, as per LEED® v4.

Section 4: Accessories

This section lists related products or materials that the manufacturer requires or recommends for installation (such as adhesives or fasteners), maintenance, cleaning, or operations. For information relating to the contents of these related products, refer to their applicable Health Product Declarations, if available.

No accessories are required for this product.

Section 5: General Notes

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Section 6: References

MANUFACTURER INFORMATION

MANUFACTURER: **ArcelorMittal Long Products Canada**
ADDRESS: **2050 route des Aciéries**
-
Contrecoeur Quebec J0L 1C0, Canada
WEBSITE: **www.long-canada.arcelormittal.com**

CONTACT NAME: **Steve Gingras**
TITLE: **Manager, Technical Services**
PHONE: **(450) 392-3376**
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KEY

OSHA MSDS Occupational Safety and Health Administration Material Safety Data Sheet
GHS SDS Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet

Hazard Types

AQU Aquatic toxicity
CAN Cancer
DEV Developmental toxicity
END Endocrine activity
EYE Eye irritation/corrosivity
GEN Gene mutation
GLO Global warming
MAM Mammalian/systemic/organ toxicity
MUL Multiple hazards
NEU Neurotoxicity
OZO Ozone depletion
PBT Persistent Bioaccumulative Toxic
PHY Physical Hazard (reactive)
REP Reproductive toxicity
RES Respiratory sensitization
SKI Skin sensitization/irritation/corrosivity
LAN Land Toxicity
NF Not found on Priority Hazard Lists

GreenScreen (GS)

BM-4 Benchmark 4 (prefer-safer chemical)
BM-3 Benchmark 3 (use but still opportunity for improvement)
BM-2 Benchmark 2 (use but search for safer substitutes)
BM-1 Benchmark 1 (avoid - chemical of high concern)
BM-U Benchmark Unspecified (insuficient data to benchmark)
LT-P1 List Translator Possible Benchmark 1
LT-1 List Translator Likely Benchmark 1
LT-UNK List Translator Benchmark Unknown (insufficient information from List Translator lists to benchmark)
NoGS Unknown (no data on List Translator Lists)

Recycled Types

PreC Preconsumer (Post-Industrial)
PostC Postconsumer
Both Both Preconsumer and Postconsumer
Unk Inclusion of recycled content is unknown
None Does not include recycled content

Other Terms
Inventory Methods:

Nested Method / Material Threshold Substances listed within each material per threshold indicated per material
Nested Method / Product Threshold Substances listed within each material per threshold indicated per product
Basic Method / Product Threshold Substances listed individually per threshold indicated per product

Nano Composed of nano scale particles or nanotechnology
Third Party Verified Verification by independent certifier approved by HPDC
Preparer Third party preparer, if not self-prepared by manufacturer
Applicable facilities Manufacturing sites to which testing applies

The Health Product Declaration (HPD) Open Standard provides for the disclosure of product contents and potential associated human and environmental health hazards. Hazard associations are based on the HPD Priority Hazard Lists, the GreenScreen List Translator™, and when available, full GreenScreen® assessments. The HPD Open Standard v2.1 is not:

- *a method for the assessment of exposure or risk associated with product handling or use,*
- *a method for assessing potential health impacts of: (i) substances used or created during the manufacturing process or (ii) substances created after the product is delivered for end use.*

Information about life cycle, exposure and/or risk assessments performed on the product may be reported by the manufacturer in appropriate Notes sections, and/or, where applicable, in the Certifications section.

The HPD Open Standard was created and is supported by the Health Product Declaration Collaborative (the HPD Collaborative), a customer-led organization composed of stakeholders throughout the building industry that is committed to the continuous improvement of building products through transparency, openness, and innovation throughout the product supply chain.

The product manufacturer and any applicable independent verifier are solely responsible for the accuracy of statements and claims made in this HPD and for compliance with the HPD standard noted.