# HEALTH PRODUCT DECLARATION V2.0

CREATED VIA: HPDC ONLINE BUILDER MVRA 900 BY ISE LOGIK INDUSTRIES ®

**CLASSIFICATION: 03 05 10 CONCRETE: MOISTURE VAPOR REDUCTION ADMIXTURE.**

Product description: mvra 900 is a non-toxic, volatile organic compound (voc) free, liquid admixture formulated to react with the hydroxide ions produced by the cement hydration process. In doing so, mvra 900 creates additional hydration products within the capillary pores and blocks them, effectively shutting down moisture vapor movement through the concrete. Manufactured with deionized water to remove trace mineral ions and containing no chloride based materials, mvra 900 will not promote nor contribute to corrosion of embedded or reinforcing steel.

## SECTION I: SUMMARY

### CONTENT INVENTORY

Threshold per material

- (●) 100 ppm
- ( ) 1,000 ppm
- ( ) Per GHS SDS
- ( ) Per OSHA MSDS
- ( ) Other

**Residuals and impuritiesconsidered in I of I materials**

- (●) See Section 2: Material Notes
- ( ) See Section 5: General Notes

**Based on the selected Content Inventory Threshold:**

CHARACTERIZED

Are the Percent Weight and Role provided for all substances? (●) Yes ( ) No

SCREENED

Are all substances screened using Priority Hazard Lists with results disclosed? (●) Yes ( ) No

IDENTIFIED

Are all substances disclosed by Name (Specific or Generic) and Identifier? (●) Yes ( ) No

### 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

MVRA 900 [ WATER BM-4 SODIUM SILICATE LT-UNK CALCIUM HYDROXIDE LT-UNK ]

## INVENTORY AND SCREENING NOTES:

This Health Product Declaration (HPD) was completed in accordance with the HPD Standard version 2.0, and discloses hazards associated with all substances present at or above 100 parts per million (ppm) in the finished product, with a highest concern GreenScreen score of LT-UNK.

**Therefore, this HPD qualifies for the LEED v4 MR credits Building Product Disclosure and Optimization: Material Ingredient Reporting (Option 1) and Material Ingredient Optimization (Option 2).**

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**VOLATILE ORGANIC COMPOUND (VOC) CONTENT**

VOC Content data is not applicable for this product category.

**CERTIFICATIONS AND COMPLIANCE**

● Self-Published* ○ Third Party

VERIFIER: SCREENING DATE: March 24, 2016 EXPIRY DATE*: March 24, 2019

VERIFICATION #: RELEASE DATE: March 24, 2016 * or within 3 months of significant change in product contents

*See HPDC website for details

## SECTION 2: CONTENT IN DESCENDING ORDER OF QUANTITY

**MVRA 900 %: 100.00 - 100.00 HPD URL: http://iselogik.com/literature.html**

Inventory Threshold: 100 ppm Residuals Considered: Yes

**MATERIAL NOTES:** Each manufactured lot of MVRA 900 is produced under some of the most exacting chemical manufacturing processes available. This includes the use of deionized water, which prevents the introduction of chloride and sulfate into the concrete batching sequence. The remaining ingredients used are ›97-99% pure according to Supplier statements. EDS, XRD, and FT-IR analyses of undissolved solids (›1 µm) filtered out of solution during the manufacturing process revealed the following: “compound consisted mostly of sodium, silicon, calcium, and oxygen; may be amorphous silica; crystalline phases identified were fedorite, scolecite, foshagite, coesite (SiO2), and possibly hectorite. These are essentially calcium, sodium, or magnesium containing alumino-silicates or silicates.” However, as these substances have been removed from solution during manufacturing, no residuals are expected to exist in the final product above the Inventory Threshold indicated.

**WATER** **ID: 7732-18-5**

%: 60.00 - 80.00 GS: BM-4 RC: None NANO: NO ROLE: Solvent

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

**SUBSTANCE NOTES:** Using only deionized water as the base ingredient prevents the unwanted introduction of chloride and sulfate into the concrete batching sequence. The percent of this substance used is given as a range in order to protect the proprietary nature of this formulation.

**SODIUM SILICATE** **ID: 1344-09-8**

%: 20.00 - 25.00 GS: LT-UNK RC: None NANO: NO ROLE: Binding Agent; Corrosion Inhibitor

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

**SUBSTANCE NOTES:** Using only deionized water as the base ingredient prevents the unwanted introduction of chloride and sulfate into the concrete batching sequence. The percent of this substance used is given as a range in order to protect the proprietary nature of this formulation.

**CALCIUM HYDROXIDE** **ID: 1305-62-0**

%: 0.01 - 5.00 GS: LT-UNK RC: None NANO: NO ROLE: Catalyst

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

**SUBSTANCE NOTES:** The percent of this substance used is given as a range in order to protect the proprietary nature of this formulation.

## 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.

### OTHER

**CERTIFYING PARTY: Self-declared | APPLICABLE FACILITIES: Gulfport, MS | CERTIFICATE URL:**

**CERTIFICATION AND COMPLIANCE NOTES:**

BCD Project Number: 140788. Results of testing show that the Type S admixture complies with the physical requirements presented in Table I of ASTM C494 “Standard Specification for Chemical Admixtures for Concrete” for non-air-entrained concrete. Results indicate 10% less shrinkage as compared to control 30 days from date of casting.

**ASTM C494**
ISSUE DATE: 2016-02-19
EXPIRY DATE: 0000-00-00
CERTIFIER OR LAB:
Burns Cooley Dennis, Inc.

**OTHER**

**CERTIFYING PARTY: Self-declared | APPLICABLE FACILITIES: Gulfport, MS**
**CERTIFICATE URL:**

**CERTIFICATION AND COMPLIANCE NOTES:**

BCD Project Number: I40788-I. Results indicate significantly reduced probability of potentially deleterious expansion.

**ASTM CI260**
ISSUE DATE: 20I5-I0-06
EXPIRY DATE: 0000-00-00
CERTIFIER OR LAB:
Burns Cooley Dennis, Inc.

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**OTHER**

**CERTIFYING PARTY: Self-declared | APPLICABLE FACILITIES: Gulfport, MS**
**CERTIFICATE URL:**

**CERTIFICATION AND COMPLIANCE NOTES:**

Project Number: 35684. Results indicate an average reduction in flow in excess of 58% as compared to control, and more than 80% reduction in flow at standard w/cm of 0.48 over control.

**ASTM D5084**
ISSUE DATE: 20I5-06-09
EXPIRY DATE: 0000-00-00
CERTIFIER OR LAB:
Geotechnical Testing Services, Inc.

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**OTHER**

**CERTIFYING PARTY: Self-declared | APPLICABLE FACILITIES: Gulfport, MS**
**CERTIFICATE URL:**

**CERTIFICATION AND COMPLIANCE NOTES:**

Ref. D23282I. Material tested: Residual, unincorporated raw materials. Test Results: Energy dispersive spectroscopy (EDS) chemical analysis was performed on a dried sludge powder per ASTM EI508-I2. The compound consisted mostly of sodium, silicon, calcium, and oxygen (Figure I). The sample was analyzed by x-ray diffraction (XRD) per ATS Procedure 962, Rev. 4, ASTM D934-I3 as a guide, and standard powder diffraction techniques using Cu K-alpha radiation. The XRD pattern is shown in Figure 2, which exhibited a strong amorphous response centered around 29 degrees. This may be amorphous silica. Crystalline phases identified were fedorite, scolecite, foshagite, coesite (SiO2), and possibly hectorite. These are essentially calcium, sodium, or magnesium containing alumino-silicates or silicates. Other elements present were either in too small of concentration as compounds to be detected by XRD, substitutional in the identified phases, or present as amorphous phases. Fourier-transform infrared (FT-IR) analysis revealed the sample to be similar to Hectorite clay (Figure 3).

**Materials Test Report**
ISSUE DATE: 20I5-04-2I EXPIRY DATE: 0000-00-00
CERTIFIER OR LAB:
Applied Technical Services, Inc.

## 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.

CONCRETE MIXES HPD URL: No HPD available

**CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:** ISE Logik Industries MVRA 900 has been specifically formulated for use in normal and light weight concrete mixes to produce low permeability concrete across a wide spectrum of mix designs. Typical uses of ISE Logik Industries MVRA 900 include but are not limited to: Slabs to receive moisture sensitive flooring and structural concrete roof decks; Elevator pits and retaining walls; Water retaining structures such as swimming pools and cisterns; Tunnels and other underground structures; Civil engineering projects of any magnitude (i.e., secant piles, roadways, dams, bridges).

## SECTION 5: GENERAL NOTES

This Health Product Declaration (HPD) was completed in accordance with the HPD Standard version 2.0, and discloses hazards associated with all substances present at or above 100 parts per million (ppm) in the finished product, with a highest concern GreenScreen score of LT-UNK. Therefore, this HPD qualifies for the LEED v4 MR credits Building Product Disclosure and Optimization: Material Ingredient Reporting (Option I) and Material Ingredient Optimization (Option 2).

# SECTION 6: REFERENCES

## MANUFACTURER INFORMATION: MANUFACTURER: ISE Logik Industries

**ADDRESS:** 14231 Seaway Road Suite 1003 Gulfport, MS 39503 USA | **WEBSITE**: http://iselogik.com/
**CONTACT NAME:** Dean E. Craft | **TITLE:** President & COO | **PHONE:** 877.549.5159 | **EMAIL:** decraft@iselogik.com

## KEY

**OSHA MSDS** Occupational Safety and Health Administration Material Safety Data Sheet

**GHS SDS** Globally Harmonized System of Classi cation 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-I** Benchmark I (avoid - chemical of high concern)
**BM-U** Benchmark Unspeci ed (insu cient data to benchmark)
**LT-PI** List Translator Possible Benchmark I
**LT-I** List Translator Likely Benchmark I
**LT-UNK** List Translator Benchmark Unknown (insufficient
information from List Translator lists to benchmark)
**UNK** 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

**Nano** Composed of nanoscale particles or nanotechnology

### Declaration Level

**Self-declared** Manufacturer's self-declaration (First Party)
**Independent** Lab Manufacturer's self-declaration using results from an independent lab
**Second Party** Verification by trade association or other interested party
**Third Party** Verification by independent certifier
**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 does not provide an assessment of health impacts throughout the product life cycle. It does not provide an assessment of exposure or risk associated with product handling or use. It also does not address potential health impacts of: (i) substances used or created during the manufacturing process unless they remain in the nal product, or (ii) substances created after the product is delivered for end use (e.g., if the product burns, degrades, or otherwise changes chemical composition). The HPD Open Standard was created and is maintained and evolved by the Health Product Declaration Collaborative (the HPD Collaborative), a customer-led organization composed of stakeholders throughout the building industry. The HPD Collaborative is committed to the continuous improvement of building products through transparency, openness, and innovation throughout the product supply chain. A disclosure completed in compliance with the HPD Open Standard is referred to as a “Health Product Declaration,” or “HPD.” The product manufacturer and any applicable independent veri er are solely responsible for the accuracy of statements and claims made in this HPD and for compliance with the HPD Open Standard noted.

ISE Logik
INDUSTRIES

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