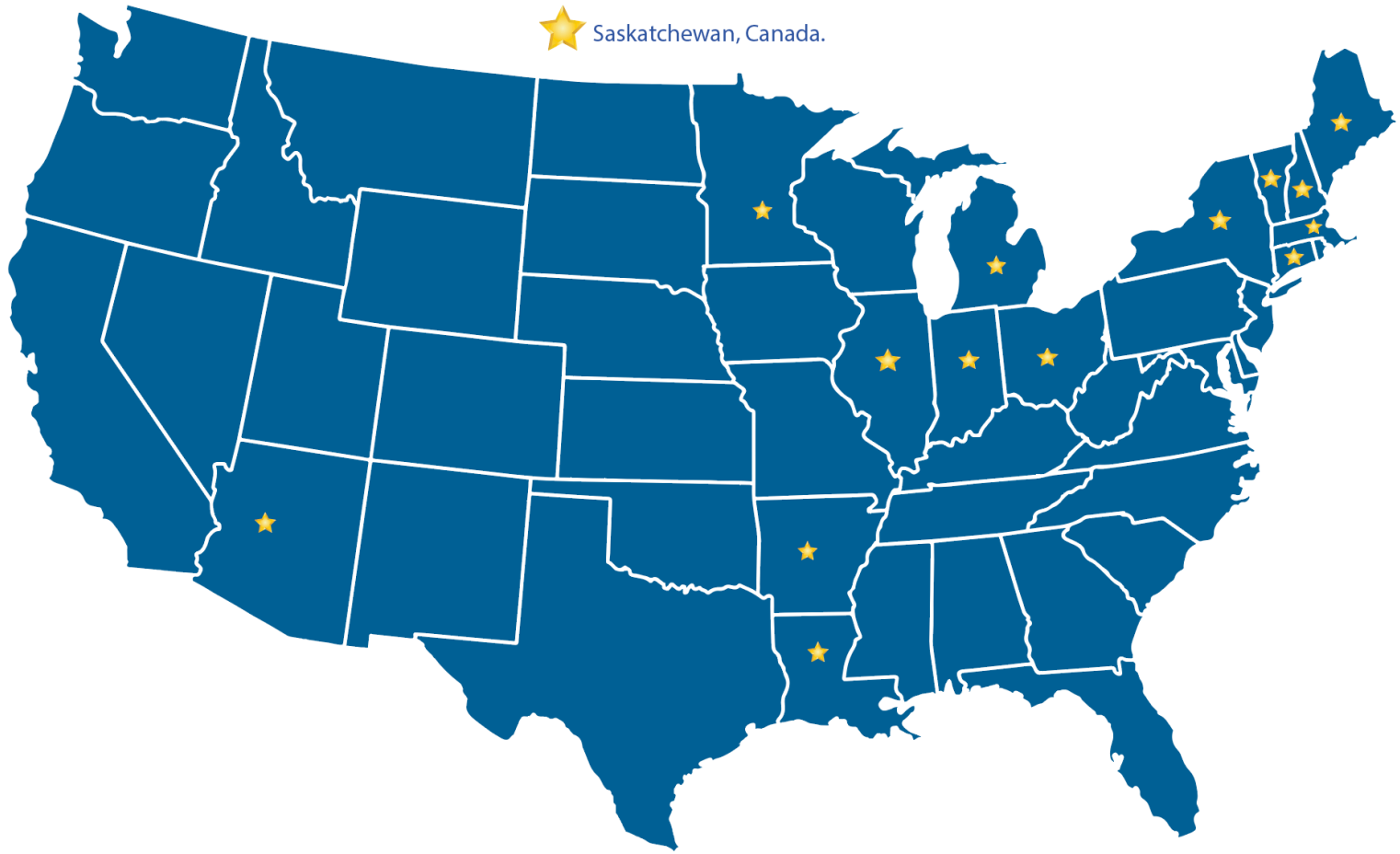
HIGH VALUE
SUSTAINABLE SOLUTIONS

INTERNATIONAL DISTRIBUTOR OF
TIRE DERIVED AGGREGATE

Civil Engineering Firms are looking for TDA Suppliers Across the Nation

I DO TDA
Building a National Network of TDA Suppliers



Current processors that have shown interest in providing TDA for projects.

(ASTM D6270)

Turning Discarded Tires into TDA Tire Derived Aggregate ASTM 6270 B Material

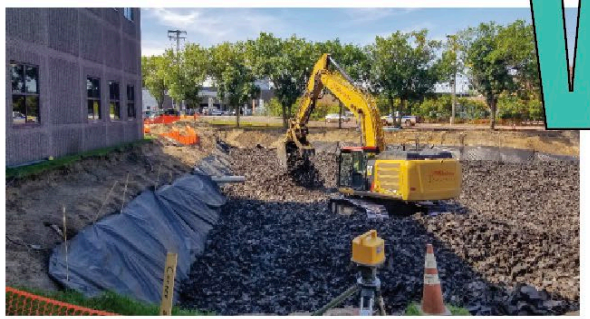
- Lightweight
- Reduced Lateral Loading
- Void Space
- Filtration Factor
- Capillary Action Break
- Permeability
- Shear Strength
- Interlocking
- Insulation
- Vibration Mitigation

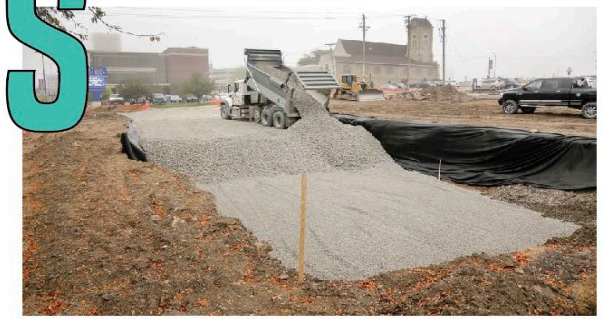
This manufactured material uses discarded tires as the feedstock material resource.

TDA Green Aggregate

Conventional Aggregate

VS





This ASTM 6270 class B TDA is a commodity and competes with other manufactured lightweight aggregates and expanded foam products.

Through education this ASTM 6270 TDA material has entered the conventional civil engineering world and competes successfully.

	Storage	Cleaning	Sustainability	Cost
TDA	**50% void space**	**Increased biofilm, phosphorus removal**	**Recycled material, LEED certifiable**	**$5-10/cubic yard**
Clean Stone	30-35% void space	Limited biofilm	Natural aggregate, mining required	$40-60/cubic yard

Important for Successful National TDA Markets

- Consistent quality-controlled manufacturing of TDA.
- Trained professionals designing solutions for problematic, failing sites or needing multiple properties of TDA.
- There are More than 8 other typical construction materials that TDA can replace favorably both in properties, and final installed safety factor and in price.

Engineer’s Choice

- The use of TDA should usually be the engineer’s choice (ASTM 6270)
- Engineers should typically compare 2-3 repair designs, then rank repair options and assign a design safety factor.
- Repair options should include installed cost comparisons. The final decision of which repair option is usually decided by the client.

This should never be a disposal option to get rid of tires or tire products

New Tires

Waste Tires

ASTM D6270: Type B
Tire Derived Aggregate

Full Circle Recycle

USGBC Award

Stormwater Projects utilizing TDA


GREEN AGGREGATE FILL
Shredded, Recycled Tires Fix Civil Engineering Challenges
Cost, Performance and Environmental Benefits
TDA MANUFACTURING
PRISTINE BY DESIGN
Environmental, Economic and 10 Performance Benefits for Your Civil Engineering Designs
TDA GREEN AGGREGATE SOLUTIONS
STORMWATER MANAGEMENT
ROAD CONSTRUCTION
SITE STABILIZATION
SLOPE STABILIZATION
RETAINING WALL BACKFILL
UTILITY BACKFILL
TRAILS
LANDFILL APPLICATIONS


TDA MANUFACTURING
PRISTINE BY DESIGN
Environmental, Economic and 10 Performance Benefits for Your Civil Engineering Designs
TDA GREEN AGGREGATE SOLUTIONS
STORMWATER MANAGEMENT
MINNESOTA ASSOCIATION OF WATERSHED DISTRICTS, INC
ANOTHER GREAT PROJECT BY
TDA MANUFACTURING
TDA Green Aggregate Solutions
Environmental, Economic and 10 Performance Benefits for Your Civil Engineering Designs


SPOKANE ACADEMIC CENTER
WSU Spokane Administration
Elson S. Floyd College of Medicine
WSU Student Affairs
Library
Café
600 N. Riverpoint Blvd.

Why has TDA not taken off?
-No One teaching the valuable properties of TDA-

We have educated recently:

68 Engineering Firms (600+ people)

31 Government Agencies (190+ people)

19 Contracting firms (133 people)

Certificate of Attendance

This is to certify that

John Smith

Attended the 1hour presentation titled

Engineering Solutions:

Tire Derived Aggregate

On

1-15-2019

1PDH Earned

Presented by

Monte Niemi, Founder & CEO of First State Tire Recycling

First State Tire RECYCLING

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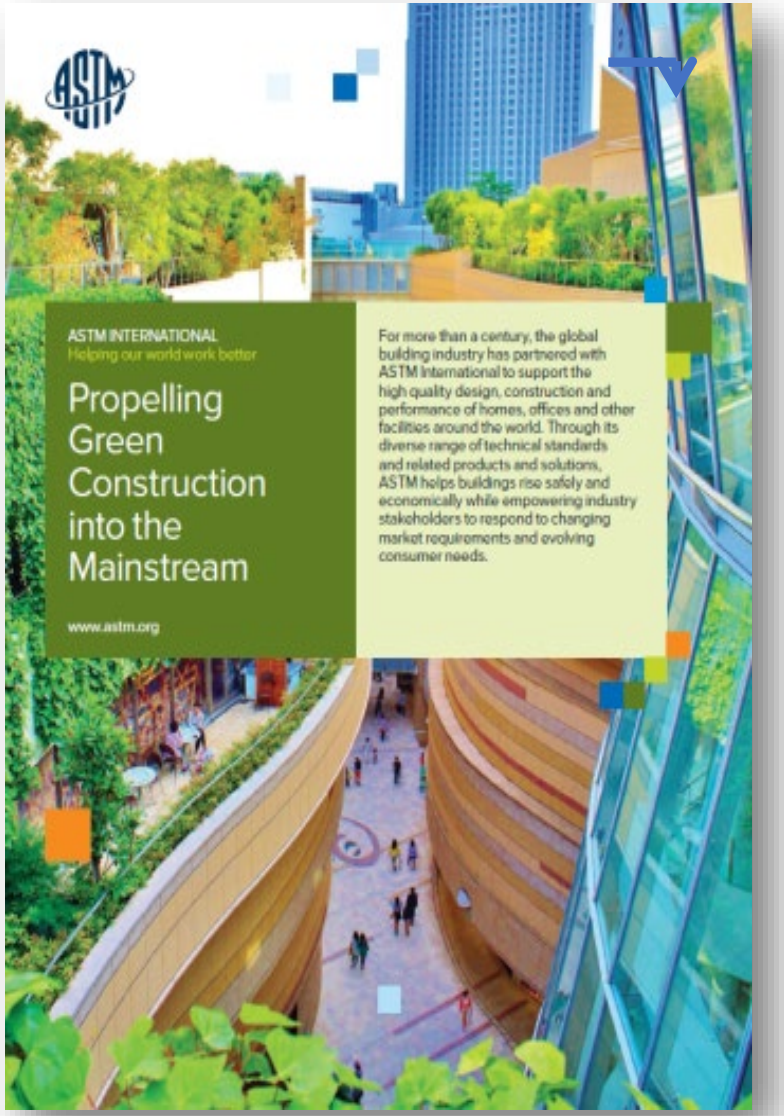
U.S. Green Building Council MEMBER

“Propelling Green Construction into the Mainstream.”

Booklet published Nov., 2015 by ASTM International



Supporting Green Building Materials

A green home is much more than the sum of its parts — it also reflects its environmental impact. Green builders pay close attention to all the details that come into play during a building's life cycle — including where it is built, the resources it consumes, how it affects the environment and what materials go into its construction. Negative environmental impact can be minimized by using and applying green materials. Products containing a high percentage of rapidly renewable resources have a lighter environmental footprint and are strongly promoted in the LEED rating system. Material durability is also an important consideration, helping to reduce life cycle costs and limit environmental impacts.

Numerous ASTM technical committees are driving the development of high quality, environmentally friendly materials that support green construction. A significant contribution is being made by Subcommittee D18.14 on Geotechnics of Sustainable Construction (part of Committee D18 on Soil and Rock), whose standards cover the use of industrial byproducts with earth materials in sustainable construction. Among these is D7760 on tire derived aggregates (TDA), a construction material produced from recycled vehicle tires. TDA can be used instead of stone aggregate in many construction applications, including lightweight backfill behind building foundations and retaining walls. D7760 also supports the testing of hydraulic conductivity, which is required in civil engineering applications of TDA.

LEED v4

“…TDA can be used instead of stone aggregate in many construction applications, including lightweight backfill behind building foundations and retaining walls.”

- (ASTM International)

Teaching the Benefits of TDA So Everyone can Do their Role in Recycling. These Cooperate Partners have TDA on their Property because it solved a design Problem better

Minneapolis Convention Center

TARGET

Caribou COFFEE

JIMMY JOHN'S Since JJ 1983 GOURMET SANDWICHES

TIERNEY TECHNOLOGIES FOR LEARNING

Ford

COBORNS DELIVERS.COM

Pilot

FLYING J

Holiday

Ruby's Pantry America's Rural Foodbank

SUBWAY

BLACK BEAR

LOWE'S

TACO BELL

MINNESOTA Twins BASEBALL CLUB

FIT FAMILY CHIROPRACTIC

HyVee

I DO TDA

International Distributor of Tire Derived Aggregate

CREATING MARKETS IN YOUR BACKYARD!

TDA is a solution for problems within civil engineering and construction uses

TDA made this possible!

Civil Engineering Firms are Looking for TDA Suppliers Across the Nation

Stop paying landfills to take your shredded tires!

Turn your waste tire materials into TDA.

TDA installed in 1990 - Minneapolis Convention Center

I DO TDA has connected "sustainable materials" to cutting edge projects for the last 30 years.

Manufacturers Suggested Retail Price

$20.00 per cubic yard

(Approx. 600lbs/cy)

This is your chance to be a part of the growing TDA industry!!

Become a part of the **I DO TDA** family, and we will connect you with the engineering firm that has designed a project in your area utilizing TDA to solve a geotechnical problem!

I DO TDA has developed and implemented a program that is educating engineering firms, contractors and state agencies about the benefits and construction practices that TDA and its 10 engineering properties bring to a wide array of civil engineering applications.

These engineering firms have offices across the country, and they are asking us to find professional, qualified TDA manufacturers in their state.

"TDA is lower costing than other aggregate products, is more durable, and is easier to install than styrofoam."

-Bolton & Menk

Waconia, MN - TDA over utility lines project

Convention Center

Lightweight fill covers underground parking ramp, reducing load on 6 story underground concrete structure, while providing drainage for any precipitation, and insulating parking ramp so not to lose heat through the rooftop park.

What tire derived products are you currently manufacturing? Check all that apply

☐ A. “Type B Tire Derived Aggregate (ASTM D6270)”

Type B TDA shall have a minimum of 90% (by weight) with a maximum dimension, measured in any direction, of 300-mm(12”) and 100% with a maximum dimension, measured in any direction, of 450-mm(18”). At least one side wall shall be removed from the tread of each tire. The side wall will be considered removed if the bead wire has been completely severed from the side wall. A minimum of 75% (by weight) shall pass the 200-mm(8”) square mesh sieve, a maximum of 50% (by weight) shall pass the 75-mm(3”) square mesh sieve, a maximum of 25% (by weight) shall pass the 38-mm(1.5”) square mesh sieve, and a maximum of 1 % (by weight) shall pass the 4.75-mm(.2”) sieve.

☐ B. “Type A Tire Derived Aggregate (ASTM D6270)”

Type A TDA shall have a maximum dimension, measured in any direction, of 200-mm(8”). In addition, Type A TDA shall have 100% passing the 100-mm(4”) square mesh sieve, a minimum of 95% passing (by weight) the 75-mm(3”) square mesh sieve, a maximum of 50% passing (by weight) the 38-mm(1.5”) square mesh sieve, and a maximum of 5% passing (by weight) the 4.75-mm(.2”) sieve.

☐ C. “Superstone”

Tire shreds shall not exceed 7” in length. 100% of material must pass 4-inch screen. Metal must be 95% embedded in rubber. Wire strands may not protrude more than ½” from side of shred.

☐ D. 1"-Minus Wire-free

100% of 1" TDA passes 1" screen. 98% of material must be wire free. 90% of material shall not pass 3/8" screen.

I Do TDA Marketing Plan Services

HIGH VALUE
SUSTAINABLE SOLUTIONS

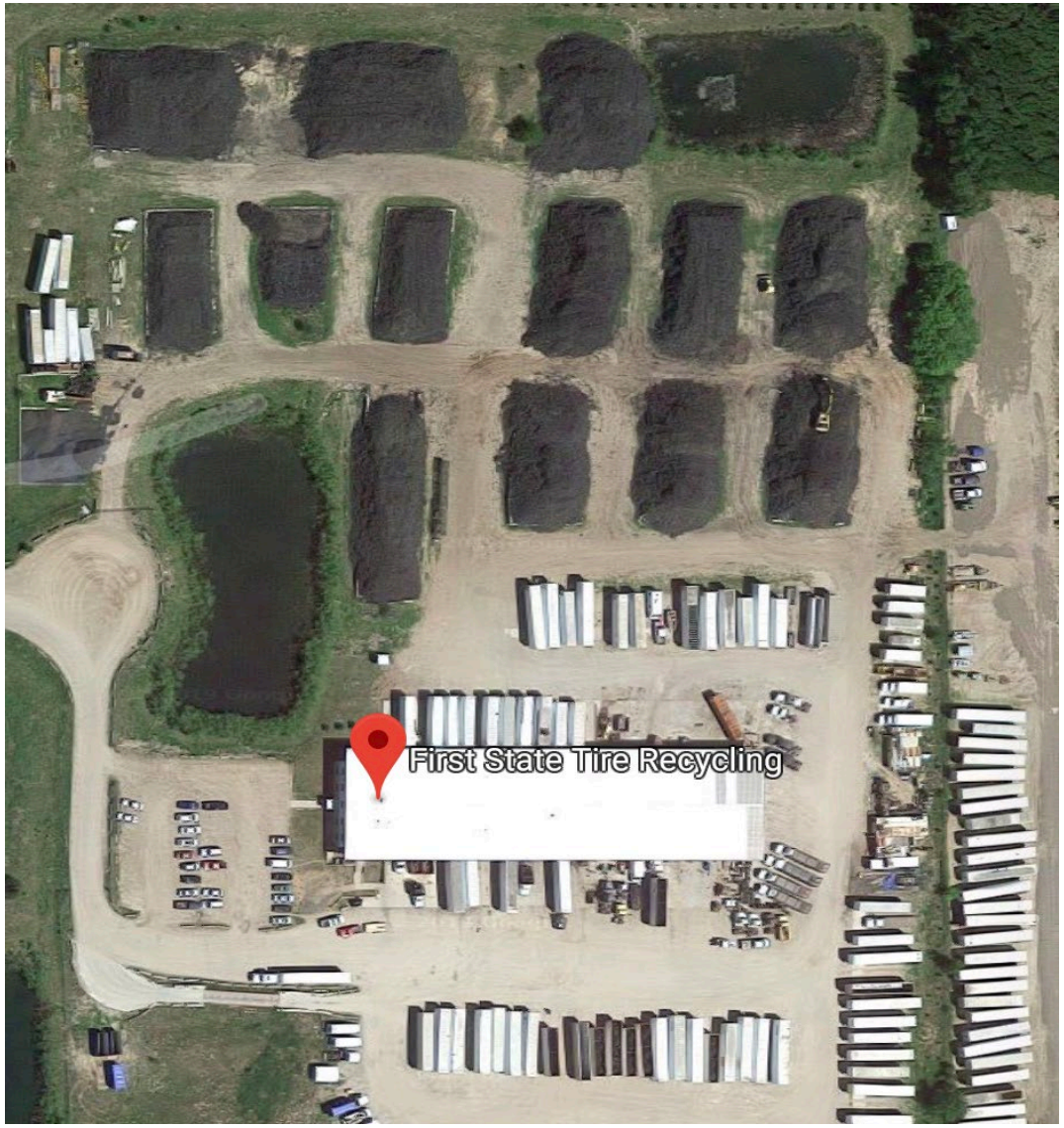
I DO TDA

INTERNATIONAL DISTRIBUTOR OF
TIRE DERIVED AGGREGATE

Contact us to discuss our marketing packages

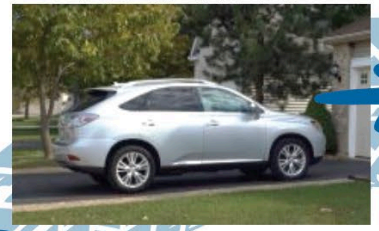
Monte@tdamfg.com

For TDA Markets to Grow in your state, TDA Is a Commodity that will Need to be Readily Available

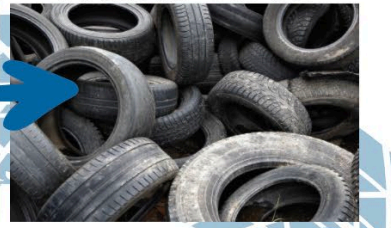


Manufactured TDA Storage bins and Loading Equipment.

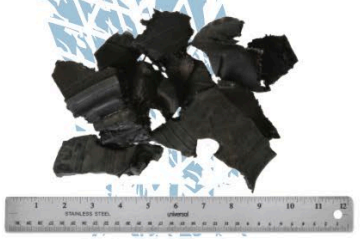
New Tires



Waste Tires



We Can Help Complete This Circle



ASTM D6270: Type B
Tire Derived Aggregate

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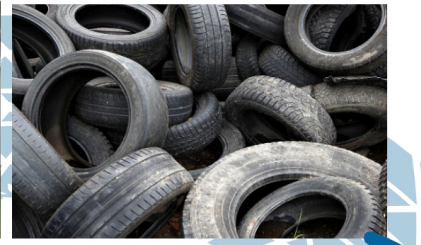
Without Your Projects

Now What?

Together we can make a better world

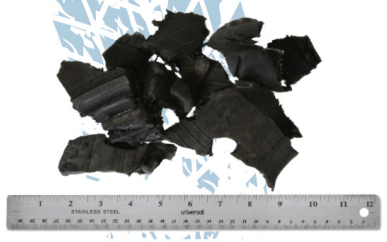
New Tires

Waste Tires



This Can Be YOUR

FULL CIRCLE RECYCLE PROGRAM



ASTM D6270: Type B
Tire Derived Aggregate

Projects Utilizing TDA

USGBC Award