Mills + Schnoering Architects, LLC
Architecture + Historic Preservation

200 Forrestal Road, Suite 3A
Princeton, NJ 08540
T: 609.681.2480

SUBMITTAL TRANSMITTAL

Project Name	Milwaukee Federal Building Facade Restoration	Project No.	1618

To:	Sam Ciminero	Date:	04/26/2018
At:	The Tradesmen Group 8465 Rausch Drive Plain City, OH 43064	Delivered via:	Electronic
Cc:	☑ Owner ☑ Architect ☑ Contractor ☑ Consultant ☑ Construction Manager		

Sender:	Christa Gaffigan	Extension:	106

Description
Submittal Number – 040142-01-0 Submittal Name – Stone Exfoliation Cleaning Data

☑ Approved
☐ Not Approved, Revise & Resubmit
☐ Resubmit For Record
☐ Approved as Noted
☐ Action Not Required
☐ Not Reviewed

Reviewed for general conformance with design concept and general conformity with information given in contract documents. Contractor is solely responsible for all dimensions and quantities, for information that pertains solely to the fabrication process or to techniques of construction and for coordination with work of all trades. The review shall not constitute approval of safety precautions or constructions means, methods, techniques, sequences or procedures.

MILLS + SCHNOERING ARCHITECTS, LLC

By: Christa Gaffigan
Date: 04/26/2018
Project No.: 1618
Log No.: 040142-01-0

Comments:

1. See attached comments from WJE.

Documents checked for general conformance with design concept and general conformity with information given in Contract documents. Contractor is solely responsible for all dimensions and quantities, for information that pertains solely to the fabrication process or to techniques of construction and for coordination with work of all trades.

WJE ENGINEERS ARCHITECTS MATERIALS SCIENTISTS

Wiss, Janney, Elstner Associates, Inc.
330 Pfingsten Road
Northbrook, Illinois 60062
847.272.7400 tel | 847.291.9599 fax
www.wje.com

SUBMITTAL REVIEW SUMMARY

To: Christa Gaffigan, Mills & Schnoering Architects, LLC

From: Kenneth Itle, WJE, April 26, 2018

Project Name: Milwaukee Federal Building and U.S. Courthouse Facade Restoration
WJE Project No.: 2016.2617
Contractor: The Tradesman Group, Inc.
Subcontractor: n/a
Date: April 19, 2018
Submittal No.: 04 01 42-01-0
Description: Granite surface treatment

We have reviewed the attached submittal package. An inventory of the submitted information is included in the table below. Our recommended response for each item is listed as either Approved (APP), Approved as Noted (APP/N), Rejected as Noted (REJ/N), or Rejected (REJ). Please contact WJE if additional information regarding these submittals is required.

Specification Section	Paragraph	Description	APP	APP/N	REJ/N	REJ
04 01 42	2.1-F-1-b	System Data: Sponge-Jet abrasive blasting	X			
04 01 42	2.1-F-1-a	Product Data: Sponge-Jet abrasive media: Silver 80; Silver 120; Brown 80	X			
04 01 42	n/a	Safety Data Sheet: Sponge-Jet silver media	For reference only			

Comments

- Media type(s) to be confirmed based on results of mock-ups.

This review is only for the limited purpose of checking for general conformance with the design requirements as given in the Contract Documents. This review is not to determine accuracy or completeness of other details such as dimensions and quantities; nor to approve means, methods, or procedures of construction or installation; nor to review safety precautions or programs, as these are the sole responsibility of the Contractor. Corrections or comments made on shop drawings do not relieve the contractor of compliance with the requirements of the drawings and specifications and the terms and conditions of the contract. Any action taken in response to the comments and recommendations contained herein shall be the sole responsibility of the Contractor.

TRANSMITTAL – GENERAL SERVICES ADMINISTRATION

Transmittal No.:
Sheet: 1 of: 1

GSA: Milwaukee Federal Building.	**Project:** Façade Restoration	**Contract No.:** GS-05-P-17-GB-C-0004	Submittal No. 04 01 42-01-0	Date: April 19, 2018
Contractor: The Tradesmen Group, Inc.		**Subcontractor/Supplier: NA**		

Item No.	Specification Section No.	Paragraph No.	Description of Item (Size, Type, Name, Manufacturer, Use, Etc.)	No. of Copies Submitted	No. of Copies Returned	Approved	Approved with Notations	Disapproved - Resubmit
					GSA ACTION			
1	04 01 42		Stone Exfoliation Cleaning System Product Data (Sponge-Jet Microabrasive System)	1				
2	04 01 42		Stone Exfoliation Cleaning System Media Aggregate Product Data (Sponge-Jet Silver 60 & 80 Media, Brown 80 Media)	1				
3	04 01 42		Stone Exfoliation Cleaning System Media Safety Data Sheet (Sponge-Jet)	1				

Contractor Signature:

Name: Sam Ciminero Title: Project Manager

I hereby certify that this submittal has been reviewed for accuracy, completeness, and compliance with contract requirements (FAR 52.236-21)

Recommended by

Title | Date

Review Comments

Action By | Date

REVIEWED
By Sam Ciminero at 9:32 am, Apr 19, 2018

Contracting Officer's Representative

Approval of this submittal is subject to the provisions of the contract drawings and specifications. This action is for general concurrence only and the Government is not responsible for errors or omission.

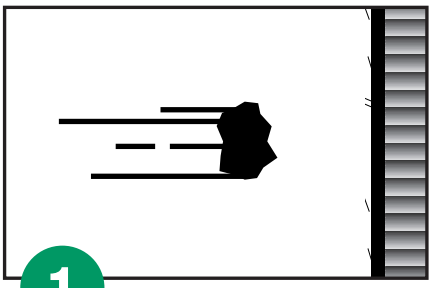
SUBMITTAL LOG DATES: From contractor [_____], To reviewer [_____], From reviewer [_____], To Contractor [_____]
Distribution: ( ) Contractor ( ) DSC File ( ) COR ( ) A/E ( ) DSC Interim ( ) COR Interim ( ) Contractor Interim

CM-16Rev. 4/00

SPONGE-JET®

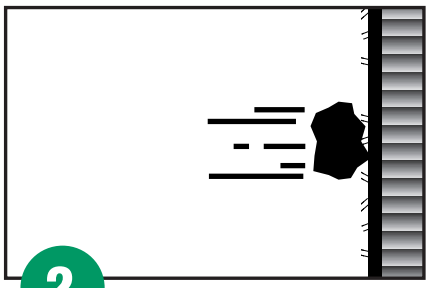
Comparing Abrasive Blasting Technologies

Conventional Abrasive Blasting Media



1

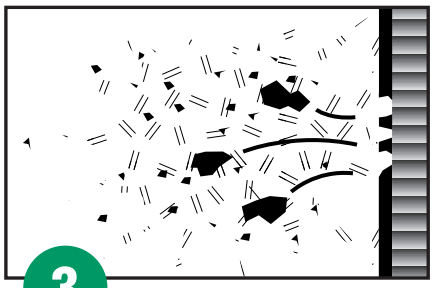
Single-component, conventional abrasives are propelled to the surface using an air-driven system



2

Upon impact conventional abrasives…

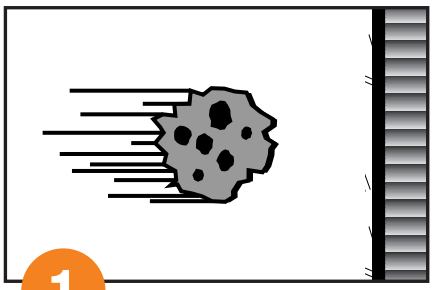
- Absorb the high-speed collision by fracturing and ricocheting into the air
- Transfer heat to the substrate
- Strip the complete coating system



3

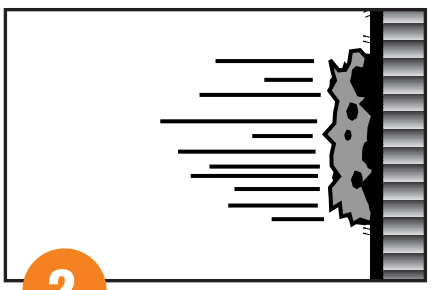
Conventional abrasives release all fractured abrasives, contaminants, and coating layers as airborne dust

Conventional Abrasive Bonded Into Sponge Media™



1

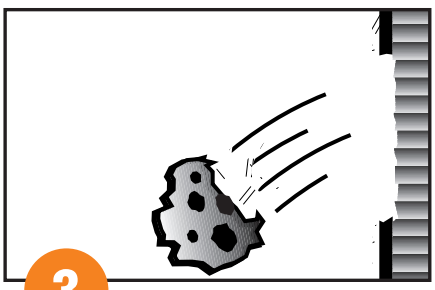
Dual-component, Sponge Media abrasives are propelled to the surface using an air-driven system



2

Upon impact Sponge Media abrasives…

- Absorb collision energy
- Flatten and suppress the release of loosened surface contaminants
- Expose its abrasives with little abrasive fracturing and remove contaminants
- Selectively or completely strip the coating system and profile the substrate



3

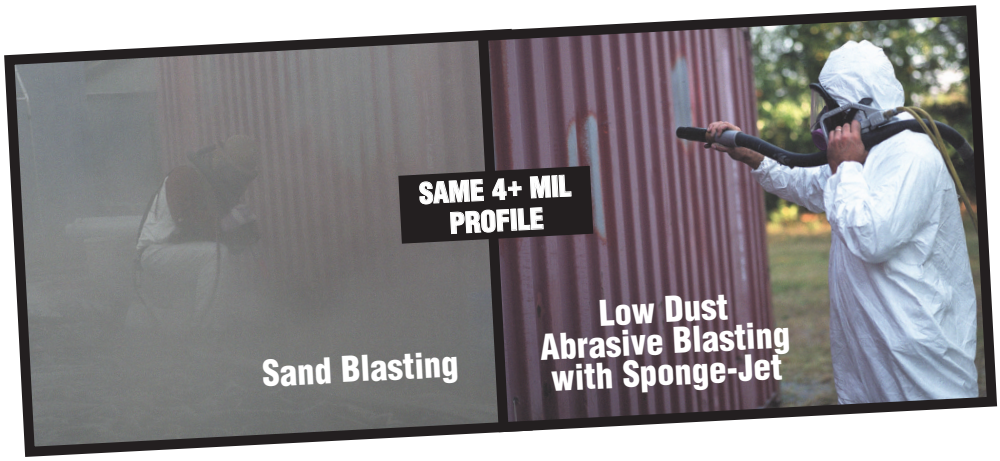
Sponge Media abrasives entrap most of what would normally have become airborne dust

SPONGE-JET®

Dry, Low Dust Abrasive Blasting

Dry Abrasive Blasting With Up to 99.9% Less Dust

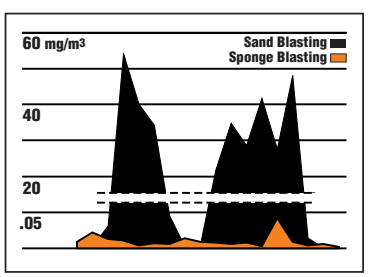
Control airborne dust near sensitive equipment or when removing hazardous contaminants and coatings.



The Story About Low Dust

Test data comparing conventional and Sponge Media™ abrasives have shown that Sponge Media abrasive blasting suppresses up to 99.9% of what would normally become airborne dust. Sponge Media abrasives are manufactured with a tough, porous urethane sponge material, which controls or suppresses dust.*

Sponge Media particles flatten as they strike the surface, then expose the abrasive where they cut into the coating and substrate, profiling (0 to 100+ microns [0 to 4+mils]) - if needed. As the Sponge Media abrasives rebound, the porous urethane creates suction, entrapping dust



paint, soot, corrosion and other contaminants. This process is known as Microcontainment.™

**Test data available by contacting Sponge-Jet, Inc.*

■ **Control the Airborne Emission of Hazardous Surface Contaminants and Coatings**

■ **New High Productions Systems**
- Nozzle production comparable with sand and coal slag
- Automatic vacuum recovery, recycling and reloading

■ **Improved Safety**
- Confined spaces are safer due to low rebound and high visibility
- Decreased dust levels means lower worker exposure
- Worker safety is enhanced due to high visibility and lower fatigue
- Risks such as skin abrasion and eye injury may be reduced

■ **Reduce Total Job Costs**
- less freight
- less disposal
- less containment and air management
- less clean-up
- virtually eliminates facility damage due to low dust and low rebound

■ **Less Down Time**
- Other trades can work during the blasting process
- Nearby process equipment can continue to operate
- Reduce total job time with less staging and cleanup

■ **Near perfect visibility**
- No waiting for the dust to settle
- Inspect during the blasting process
- Enhanced visibility lessons the likelihood of rework

Visit Sponge-Jet, Inc. at **www.Spongejet.com** or call **603-431-6435** to learn more about the Sponge Blasting System

Blast Where You Want.™

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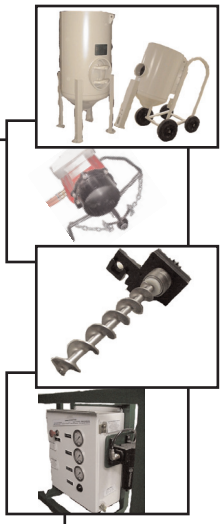
SPONGE-JET®

Sponge-Jet® High Production Feed Units™

NEW BIGGER PIPING! FOR HIGH-PRODUCTION ABRASIVE BLASTING

High-production, Dry, Low Dust Abrasive Blasting



Begin with a traditional, certified sand blasting pressure vessel

Add a customized, high-performance agitation assembly with up to 463 Newton Meters (4100 inch-pounds)* of force, 20,000 rotations per day

And pneumatic, auger-based abrasive delivery system which controls the quantity of abrasive mixed into the air stream

With a comprehensive operator control panel for the monitoring and adjustment of media feed rate, blast pressure and line pressure

100-HP Feed Unit™

For ease of mobility on small to medium projects

ASME COMPLIANT OR CE MARKED

Height - 127cm (50in) / Width - 74cm (29in)

Length - 115cm (45in) / Weight - 230kg (485lb)

200-HP Feed Unit™

For extended-time blasting and ease of mobility on small to medium projects

AVAILABLE IN EUROPE ONLY

CE MARKED

Height - 155cm (61in) / Width - 80cm (32in)

Length - 110cm (43in) / Weight - 305kg (670lb)

Easy Operation

Centralized controls for precision monitoring & adjustment

-

Comprehensive labeling for system navigation

-

Color-coded lines for easy troubleshooting

Reliable

Four different desiccate & element moisture separators prevent excessive moisture from entering the blast stream & controls

-

Five mufflers control noise and emissions

-

Extended Service Air Motor and Auger Bearings minimize maintenance and wear

-

High quality, industry standard components assure for long, trouble-free operation and simplified spare part acquisition

Patented Technology

Patented protection and process licensing with Sponge Media™ abrasive

400-HP Feed Unit™

For extended time blasting on larger projects

ASME COMPLIANT

Height - 183cm (72in) / Width - 92cm (36in)

Length - 130cm (51in) / Weight - 554kg (1,220lb)

To learn more visit Sponge-Jet, Inc. at **www.spongejet.com**; call **603-431-6435** or in Europe call **+44-1253-390731**

*Based on Sponge-Jet 400-HP Feed Unit. ©2007 Sponge-Jet, Inc. All rights reserved.

SPONGE-JET®

Sponge-Jet® Recyclers

Reduce Material Requirements up to 95% by Recycling Abrasives

LIGHT, HIGHLY MOBILE RECYCLING SYSTEMS

REDUCE HANDLING AND TRANSPORTATION COSTS BY RECYCLING SPONGE MEDIA ABRASIVES ON THE JOB

Highly mobile, electric and pneumatic Sponge-Jet Recyclers efficiently reduce abrasive consumption by separating good, reusable Sponge Media abrasives from dust, contaminants and/or potentially harmful waste - which might normally become airborne dust. By reusing Sponge Media 6 to 15 times, abrasive costs are cut up to 95%, as are freight, handling, clean-up and disposal costs.

35-P Sponge-Jet Recycler™

A reliable, efficient work horse for all projects

Height - 122cm (48in)
Width - 84cm (33in)
Length - 84cm (33in)
Weight - 136kg (300lb)

REQUIREMENTS:

Minimum 2,832 L/min (100-CFM) compressor at 2 bar (30-PSI) minimum 1.27cm (.5in) inside diameter, 2-lug, Chicago fitting

Special Order Sponge-Jet Recyclers

35-E Sponge-Jet Recycler™

Reliable and efficient - with the same capacity as the Sponge-Jet 35-P Recycler but powered with ELECTRICITY

Height - 137cm (54in)
Width - 74cm (29in)
Length - 61cm (24in)
Weight - 148kg (325lb)

REQUIREMENTS:

Minimum 30-amp, 115-volt, single-phase, 60 Hz power source

70-E Sponge-Jet Recycler™

A large, heavier, less mobile ELECTRIC Recycler

Height - 130cm (51in)
Width - 117cm (46in)
Length - 107cm (42in)
Weight - 294kg (650lb)

REQUIREMENTS:

Minimum 30-amp, 115-volt, single-phase, 60 Hz power source

Visit Sponge-Jet, Inc. at **www.Spongejet.com** or call **603-431-6435 (in Europe +44-1253-390731)** for more about the Sponge Blasting™ System

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SPONGE-JET®

Sponge-Jet® Feed Unit™

RASP XTREME

for Remote Area Surface Profiling

NEW! from Sponge-Jet to the Industry

High-quality Abrasive Blasting in Remote and Confined Spaces with Greater Efficiency, Production and Mobility

RASP Xtreme™

For remote area surface profiling

ASME COMPLIANT

Height - 119cm (47in) / Width - 59cm (23in)

Length - 56cm (22in) / Weight - 58kg (127lb)

Go to the Xtreme to protect your assets from corrosion brought on by sub-standard surface preparation in confined spaces - or areas formerly prohibited from blasting. **This new system is unlike any other conventional pressure vessels or Sponge-Jet Feed Units™:**

LIGHT AND COMPACT:

- Fits easily through man-way holes 61cm(24in) diameter
- Weighs less than 59kg(130lb)

HIGHLY PRODUCTIVE:

- Capable of full pressure blasting at 8bar(120 psi) with up to a #10 nozzle
- Uses a pneumatic, auger-based system for precise control of media concentration at low pressures
- Holds up to 37*L*(1.3cu.ft) of Sponge Media™
- 1¼in piping with 2in Regulator to assure adequate air flow without restriction

EASY HANDLING & OPERATING:

- Integrated lifting eyes and hand truck frame for ease of mobility
- Top facing controls and gauges regulate media feed and blast pressure

OPERATING RANGE: Smooth Sponge Media flow with nozzle pressure from .1bar(2psi) to 8bar(120psi)

REQUIREMENTS: Minimum 2bar(30psi) to power the auger system

USABLE MEDIA: Silver Sponge Media™, Red Sponge Media™, White Sponge Media™, Green Sponge Media™ and Blue Sponge Media™ products

To learn more visit Sponge-Jet, Inc. at **www.spongejet.com**; call **603-610-7950** or in Europe call **+44-1253-390731**

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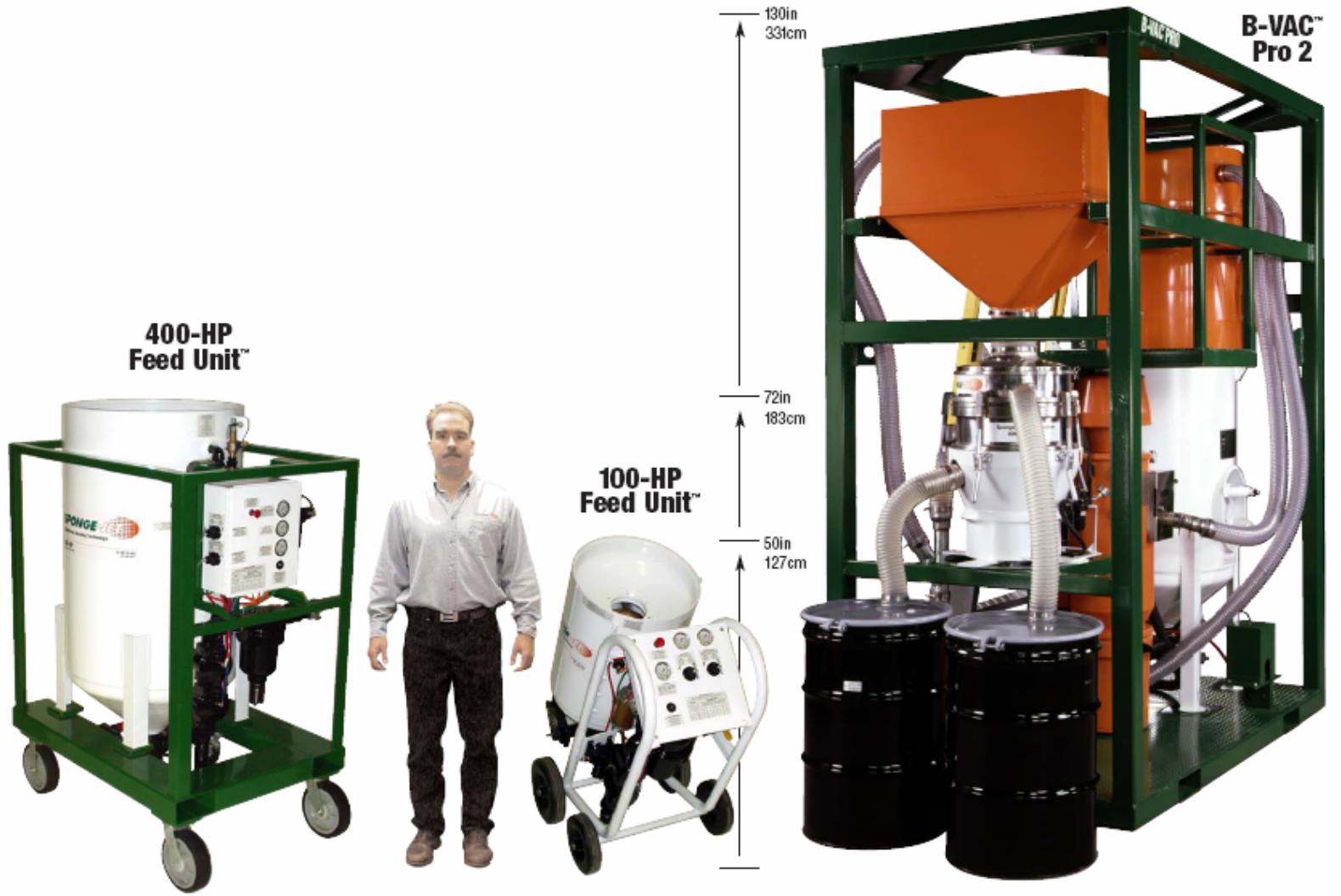
Sponge Blasting System™

- The Sponge Blasting System™
  - Sponge-Jet Feed Unit™
  - Sponge-Jet Pneumatic Media Classifier™

Sponge Blasting System™



Sponge Blasting System™™

- Sponge-Jet Feed Unit™
  - Delivers Sponge Media to the surface
  - Monitors specific flow characteristics
  - Optimizes production and rebound
  - Controls Sponge Media / air mixture

Sponge-Jet Sponge Blasting System™

- Sponge-Jet Pneumatic Media Classifier™
  - Prepares and cleans Sponge Media for reuse
  - Separates media into three categories:
    - Oversized debris
    - Reusable Sponge Media
    - Fines; spent media and dust

CAPITOL IDEA

A multimillion-dollar restoration of the Wisconsin State Capitol means out with the new and in with the old

By Morgan Luciana Danner, *Production/Web Editor*

Instrumental in the birth of the skyscraper, the late New York City architect George B Post designed a more ornate type of building in I90d that has remained a monument to him and to classic design. His Wisconsin State Capitol in Madison was designed to be built in stages because of financial limitations and the necessity of housing the government during construction. The interior also has changed as the building meets the needs of a growing state, Now, some 14 years and $141 million into its most extensive renovation ever, the Badger Stale capitol has recaptured virtually all of the glory that it once had in its heyday.

"Certainly, the rotunda is 100 percent restoration," says Anne Biebe! of Madison-based Isthmus Architecture, the project's architectural historian.

Adds Daniel Stephans, project manager for the Stale of Wisconsin, "The goal of the project was to preserve or restore public areas and to renovate the private office areas with respect to all of the original building fabric."

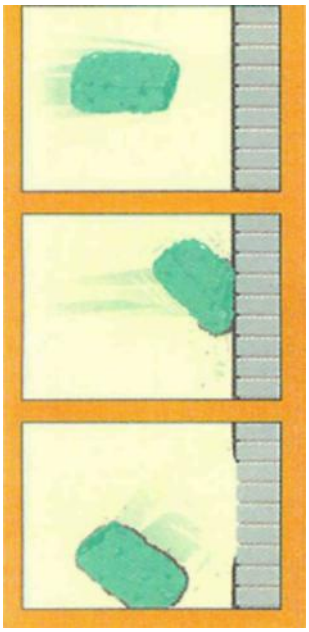
The exterior composed entirely of white Bethel Vermont granite and including stone ornaments and statues, balustrades, columns, walls and stair treads, underwent a sponge bath during mid-2001. That summer, tiny polyurethane sponges impregnated with grit that was no harder than the stone were shot by pneumatic pressure at the granite. The bath was necessary- to exfoliate the stone, which was returning to its natural clay stale, according to James Schumacher, senior project manager with contractor J.P Cullen & Sons, Madison.

Attempting to determine the proper meth-

A rich example of Beaux Arts architecture, the Wisconsin State Capitol in Madison contains four wings in which grand staircases do not obstruct the view of the ground floor or first-floor rotundra. Every square foot of the building underwent a transformation, requiring painstaking matching of white oak and wood stain. *Photos: Nels Akerlund*

The capitol exterior is dad in white Bethel Vermont granite, which has been returned to its former state.

Conventional abrasive bonded into sponge media



In sponge blasting, stone ornaments, statues, balustrades, columns, walls, stair treads and the dame were bombarded wish tiny sponges shot pneumatically. They flatten on impact and grab the dirt before falling. Source: Sponge-Jet INC

od to clean the exterior, The building team Tested blasting with water, baking soda, carbon dioxide and sponges in the summers of 1999 and 2000." The goal was not necessarily to clean the building, [but] to conserve the stone so that it would not continue lo exfoliate.' explains Schumacher sandblasting would have cut into the stone, and blasting with baking soda, carbon dioxide and water beads left a mess. So sponge particles provided by Eliot, Maine-based Sponge-Jet Inc. were used. They flatten on impact, exposing banded abrasives and dislodging contaminants horn the granite. After dropping from the surface, the sponges resume their original shape. A vacuum system recovers the sponges, transports them to a machine that removes contaminants and then reloads them for nearly continuous blasting

Process new to U.S. **conservation**

Although the sponge blasting technique has been used since the early 1990s for cleaning the interior of tanks and paint booths, as well as the fuel cells of airplanes, its employment in cleaning the capitol was among the earliest for building conservation efforts in the United States, the technique has been used in Europe, however. "Now that its been done [here], it's going 10 be done a lot." Schumacher predicts.

Construction technology has changed greatly since the early 1900s, when the stale Capitol was constructed without expansion joints. Over the years, responding to temperature fluctuations, the stone cladding materials expanded and contracted, creating their own expansion joints. The building team addressed those areas to allow for the free movement of the building materials, alter monitoring them to see how sunlight heats up particular areas which then cool. "We actually installed soft joints in those locations." Schumacher says.

As office areas were rehabilitated, building materials that were unneeded where they were, such as stone and wood, were used elsewhere in the building.

Most of the floors were marble, which was removed for asbestos abatement. In the public areas, every piece was tagged, marked and went back to its original location. If it could not be salvaged, the state had replacement marble from other buildings that had been razed around the state; some from prisons and some from schools. 'We were very fortunate when that happened," says Charles Quagliana, who began this job as project manager for the state and finished as project architect for Isthmus. Of note, marble partitions in bathrooms had to be moved to allow for ADA compatibility. Quagliana credits the masons for making stonecutting appear as easy as cutting plywood "These guys were just artists. They made it look relatively simple." he says.

A search for materials

Finding the much rarer white oak, as well as matching the new with the old. Proved to be a real challenge, says Schumacher New mill-work knives were created to match the trim.

The original wood was stripped, restained and finished, requiring painstaking matching of existing white oak with new white oak the rule was to restore, and where renovated, reuse," says Stephans.

Doing so was not always easy. As Schumacher explains, old wood accepts stain differently from new wood in the color, depth and grain. So an artist's touch was necessary.

Finding clay tile that matched the size of the original wall tile also was difficult. While those tiles were popular in the early part of the 20th century, Today only a couple of manufacturers offer the product. Getting that type of tile was important, because it is really lightweight and fireproof, says Quagliana.

By the lime the project was completed last September, every square foot of the building had been touched by hand. "What I have most of is paperwork," says Stephans, "We went very fast, paper to follow." **BDC**

Sponge-Jet and the Sponge Blasting™ System

Continue Other Activities During Surface Preparation

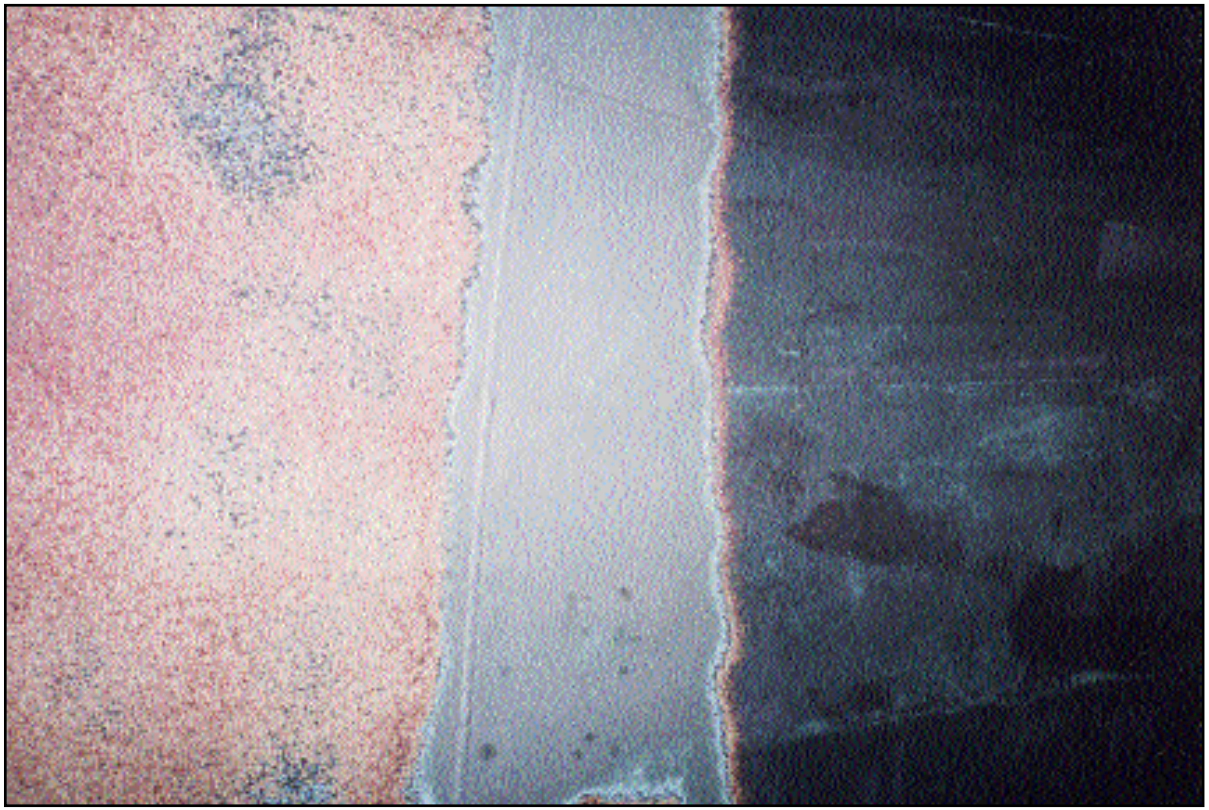
Sponge Blasting:

- Reduces dust
- Less rebound
- Less containment
- High overall productivity

Why Create 5,500 Times the Dust?

Blasting with Sponge Media™ abrasives can reduce dust levels as much as 99.9% when compared to traditional abrasive blasting.

Profile 0-100+ Microns With One System



The same abrasives commonly used - steel grit, aluminum oxide, Dupont Starblast,® glass and plastic, but enhanced by bonding them to urethane sponge

SPONGE-JET®

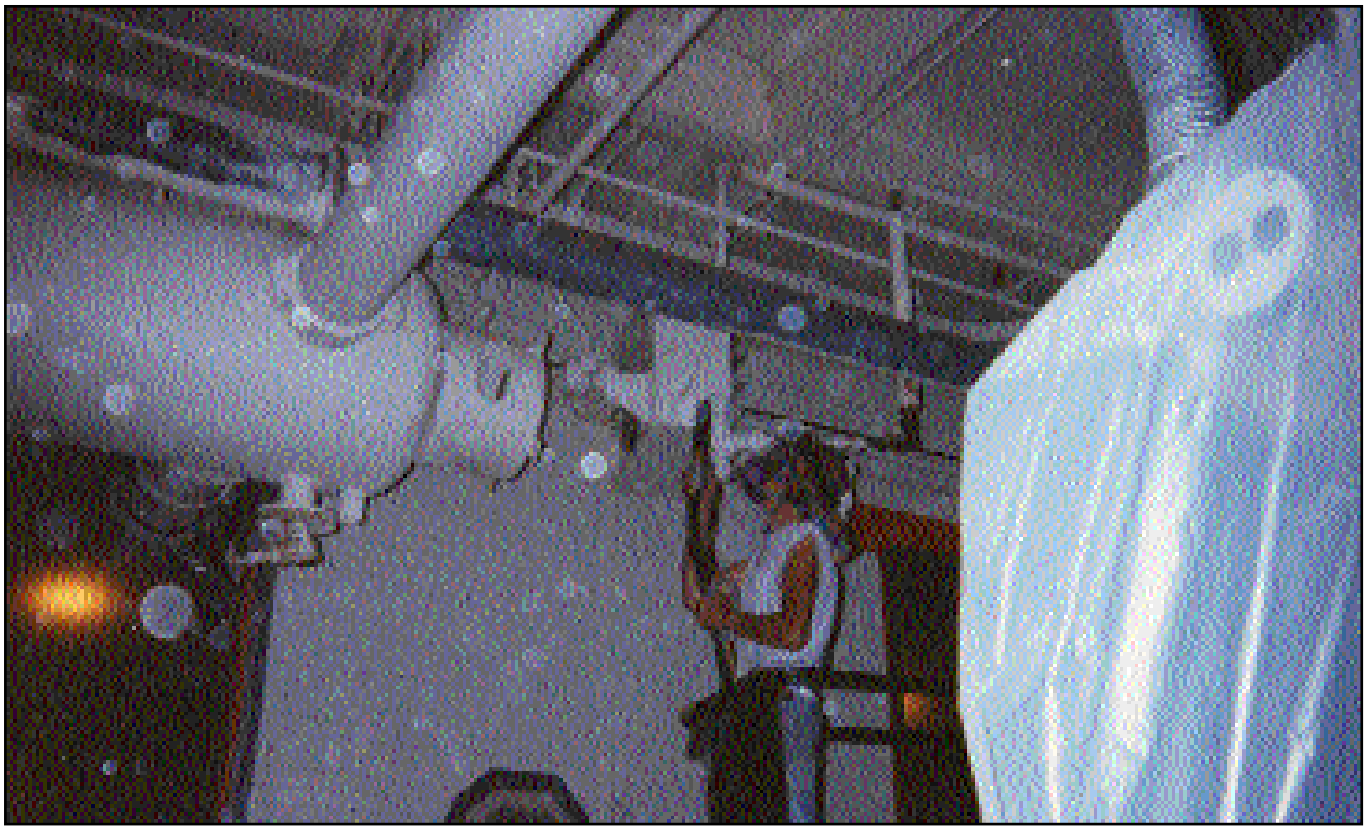
Virtually Eliminate Rework

How can you expect first-pass quality prep if you can’t see your work? Sponge-Jet lets you see clearly and gives you the ultimate control.

Remove More Chlorides Faster

Test after test, Sponge-Jet does achieve specified levels without the need to rinse and reblast like conventional abrasives.

Blast When and Where You Want

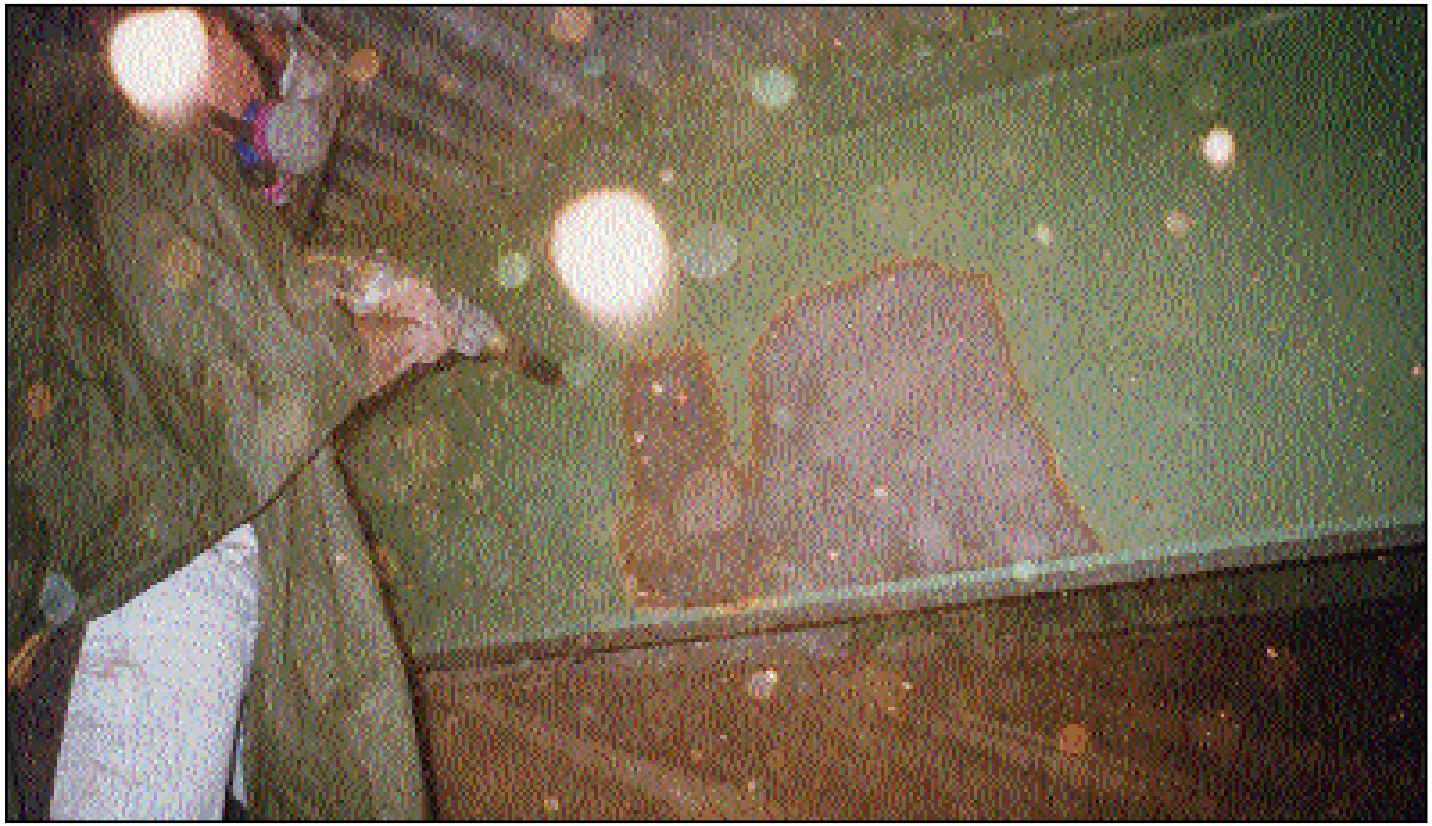


Sponge Media abrasives reduce rebound energy causing less damage to surrounding surfaces and sensitive machinery.

Easier and Faster Cleanup

Support personnel can easily sweep or vacuum Sponge Media™ abrasive (and the trapped dust particulate) more easily than traditional abrasive media.

New High Production Systems



The large bore Sponge-Jet Feed Unit™ conveys more Sponge Media abrasive to the surface, dramatically improving production rates.

Less Need for Extensive Containment

Sponge Media abrasives absorb rebound energy, reducing media ricochet, allowing for less extensive containment.

Reuse Sponge Media up to Ten Times

- Use less abrasive media
- Lower handling costs
- Reduce waste and disposal costs

Clean Abrasive Blasting Process

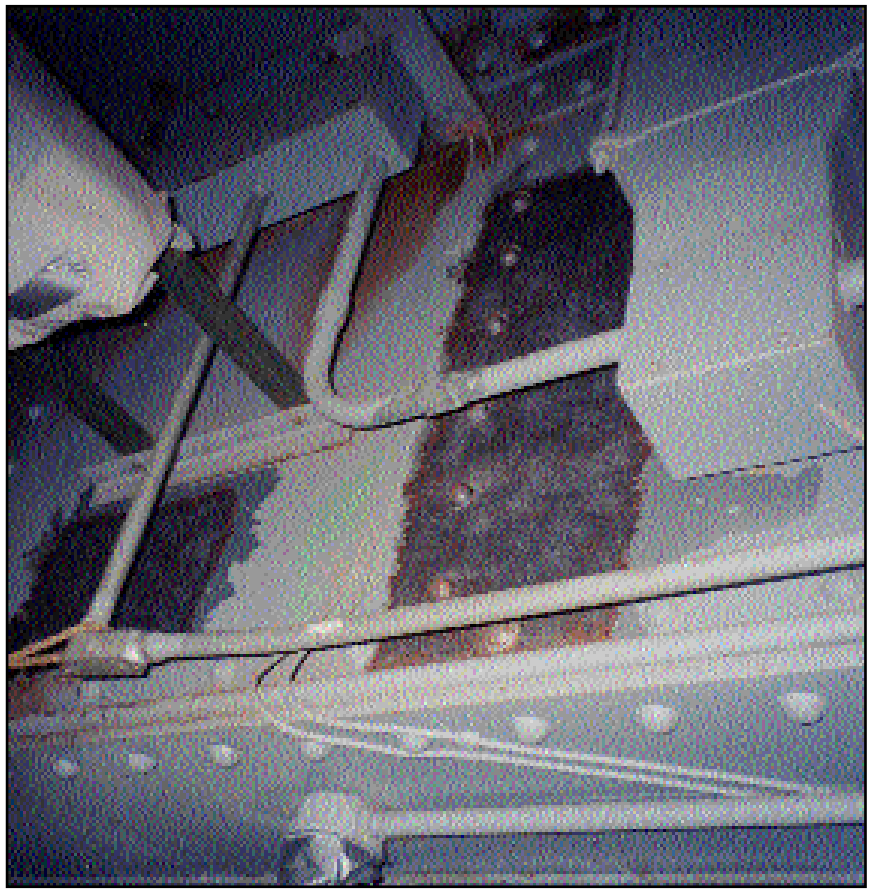
- Simplify surface preparation
- Blast in sensitive surroundings
- Reduce fatigue on the blaster
- Enjoy fast, easy clean-up

Low Dust Blasting

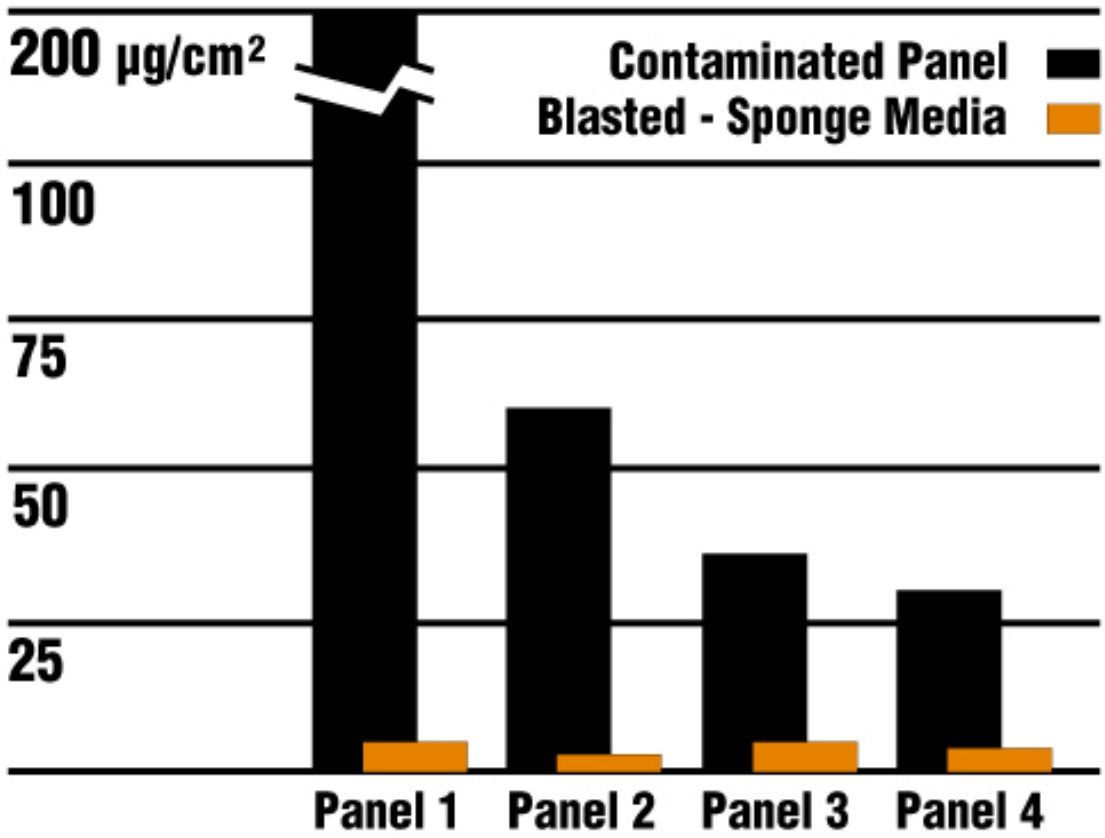
- Gain better visibility
- Blast in confined areas
- Conduct lead, asbestos or pcb abatement
- Observe real-time blasting results

Totally Dry Abrasive Blasting Process

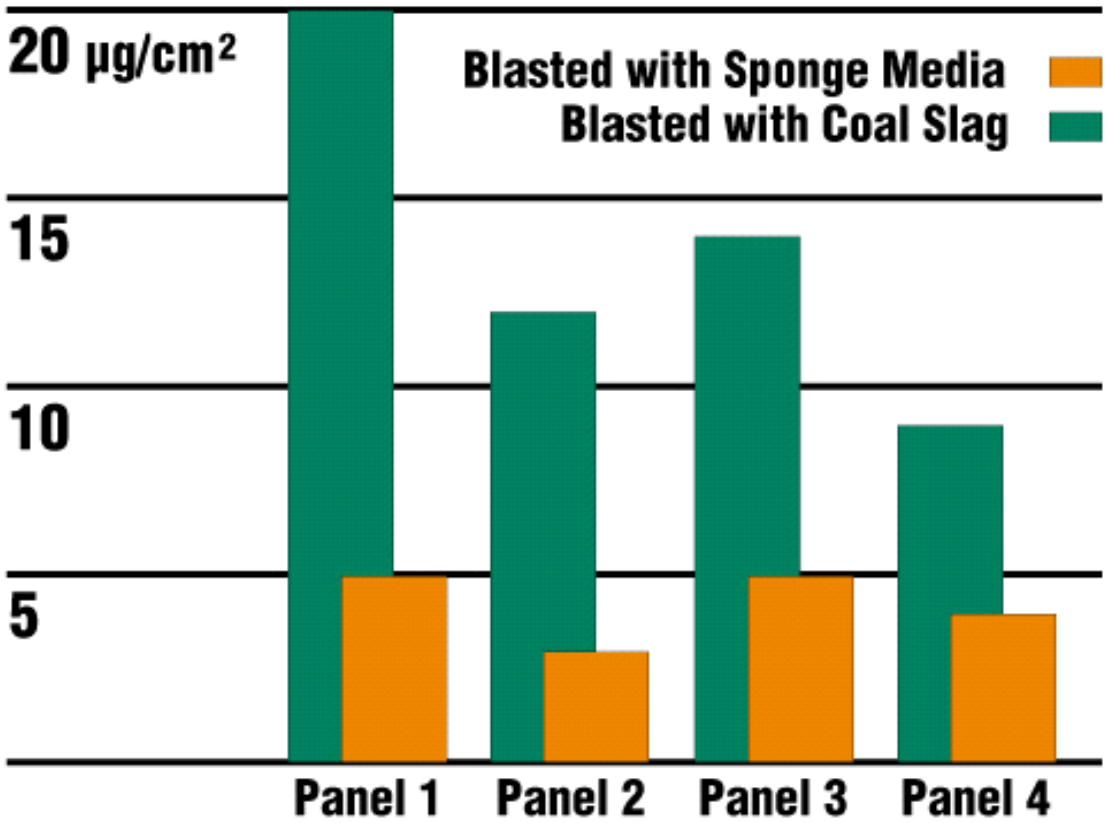
- Blast near sensitive equipment
- Work near active electrical components
- Eliminate water, slurry or runoff problems



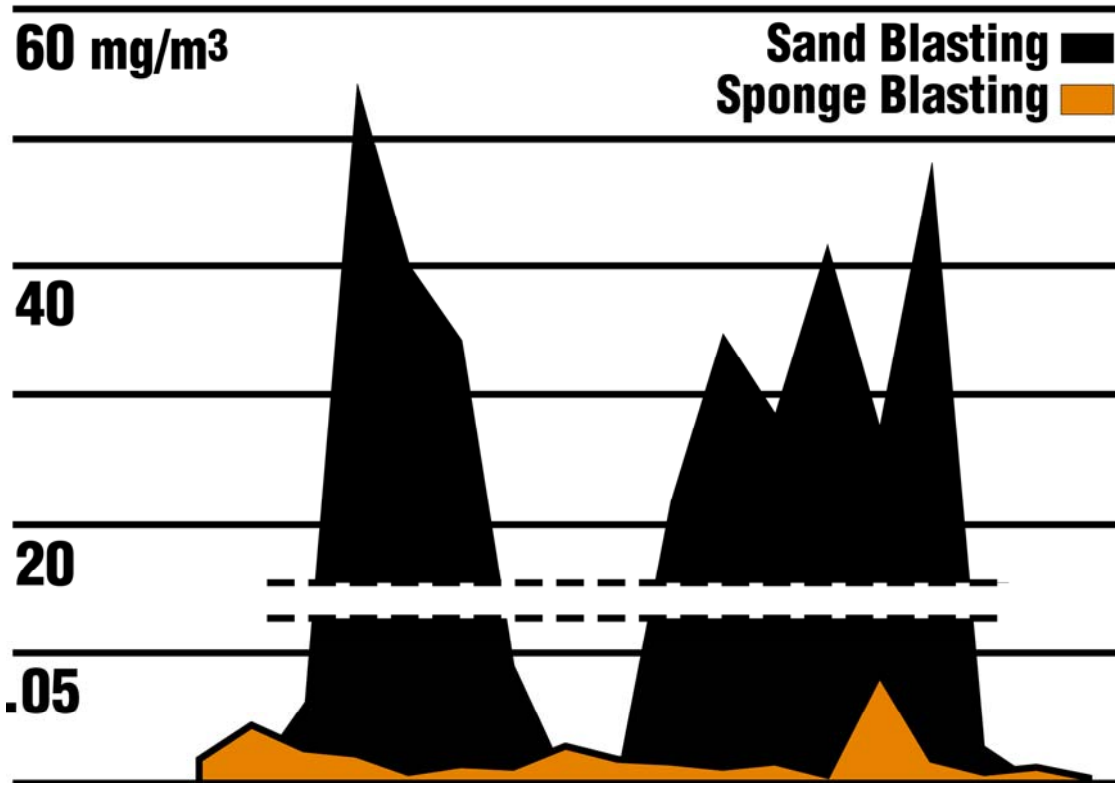
Residual Chloride Comparison - A



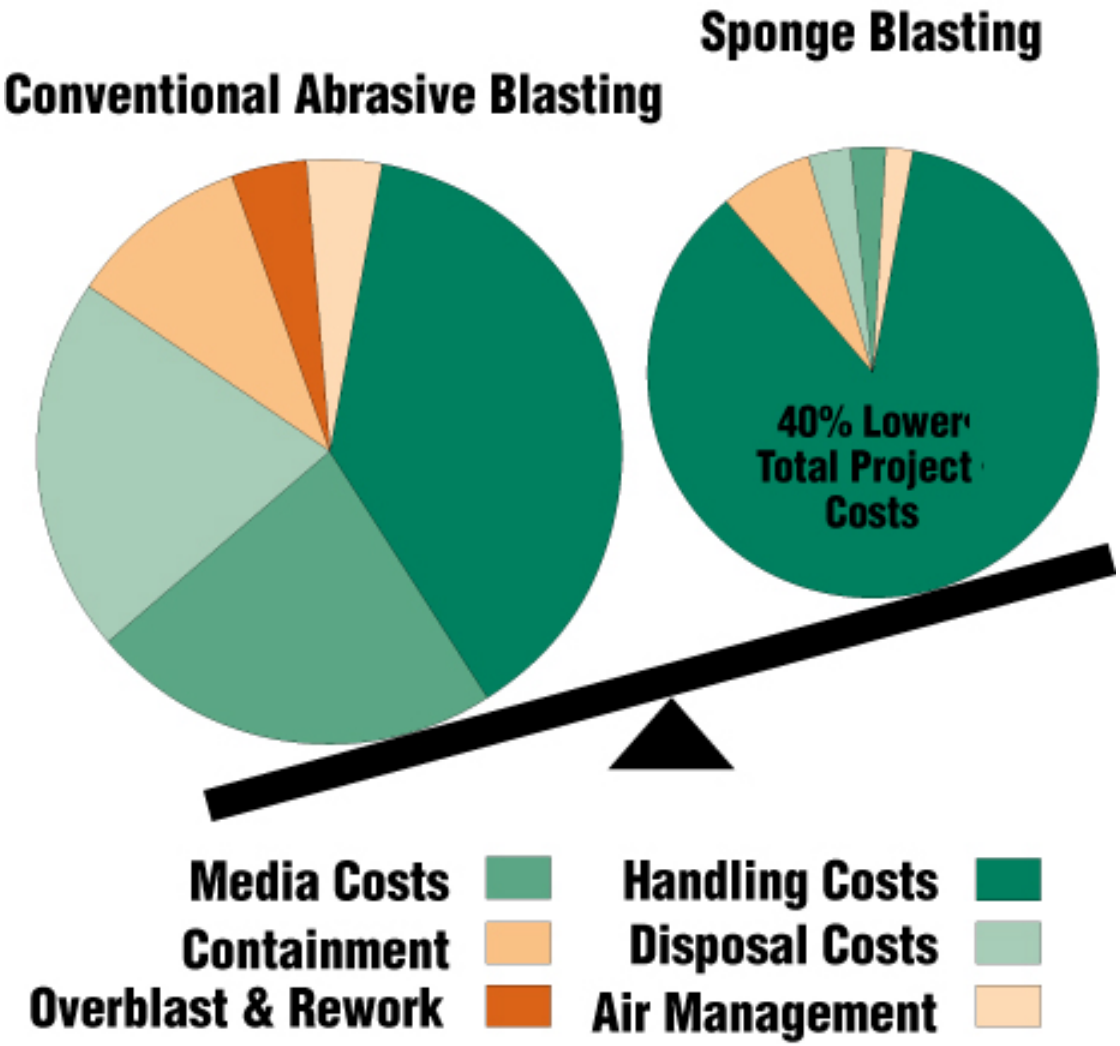
Residual Chloride Comparison - B



Airborne Contaminant Comparison



Sponge-Jet Total Project Savings



Sponge-Jet: Summary

- **SPONGE-JET MEDIA - Is a Composite of Open-Cell Polyurethane Foam (Sponge) and Abrasive. It Is Patented in US and Europe.**

- **SPONGE-JET EQUIPMENT**
  - **FEED UNIT - Is a modified Abrasive Blast Unit (Sand Blast Pot). It has been designed to blast the Sponge-Jet Media reliably. Primary difference is an actuator in the pressure vessel and a screw auger below the vessel which provides controlled flow of media. They are Patented in US and Europe.**
  - **Recycler - Is a Vibratory, multi deck classifier. It is used to separate and clean Sponge-Media for recycling and reuse.**

- **SPONGE-JET PROCESS - Is the process of cleaning or preparing a surface with pneumatic propulsion of a sponge/abrasive composite. It Is Patented in US and Europe.**

Sponge-Jet Delivers Many of the Benefits Customers Demand

- **COST SAVINGS**
- **IMPROVED WORKER SAFETY**
- **ENVIROMENTALLY PROACTIVE**
- **REDUCED MANUFACTURING TIME**
- **REDUCED LABOR CONTENT**
- **ACHIEVES “BEST PRACTICES” STATUS**
- **TECHNICALLY BETTER SOLUTION**
- **CONTROLLABLE PRODUCTION TOOL**
- **QUALITY: BEST IN CLASS**

New High Production Systems

The large bore Sponge-Jet Feed Unit™ conveys more Sponge Media abrasive to the surface, dramatically improving production rates.

Applications

- Industrial Coating Maintenance
  - Bridge and industrial structures
  - Railcars and mass-transportation
  - Water and waste-water plants
  - Offshore structures
  - Petrochemical facilities
  - Marine vessels
  - Military - ground, sea and air Segments
  - Food processing
  - Pulp and paper mills

Applications

- Abatement
  - Lead abatement
  - Asbestos abatement
  - PCB abatement

Applications

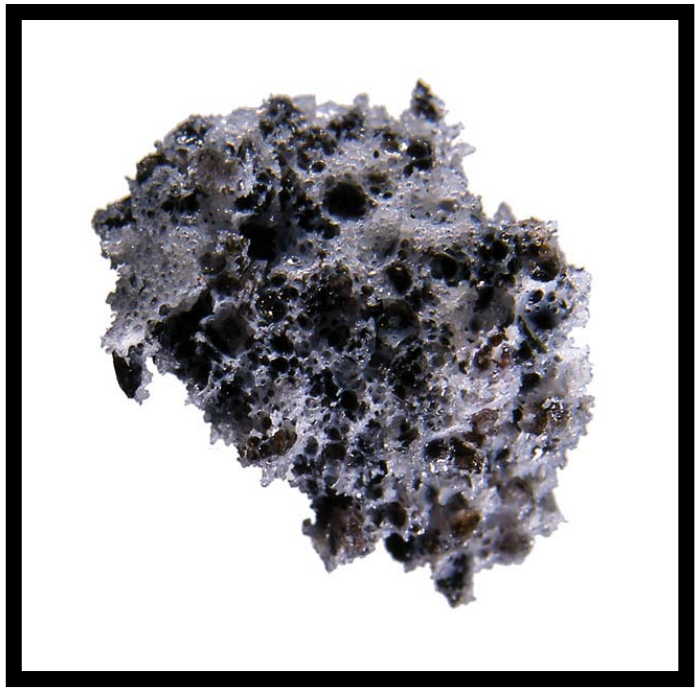
- Decontamination
  - Nuclear power generation
    - Low-level decontamination
    - Steam generator parts and tools
      - Stainless steel turbines
      - Reactor coolant piping

Applications

- Cleaning and Restoration
  - Fire damage / soot removal
  - Machine cleaning
  - Parts refurbishment
  - Interior and exterior wall; ceiling cleaning

Sponge Media™

- Silver Sponge Media™
  - Fast cutting and aggressive
  - Industrial, commercial, marine and military coatings removal
  - 1+ mil profile on steel substrates
  - Contains aluminum oxide
  - Clean, remove paint and profile in one step



Sponge Media™

- Brown Sponge Media™
  - Light coatings removal with minimal surface profiling
  - Contains Dupont Starblast®
  - Light rust, cracked or peeling paint
  - 2 mil profile on steel substrates

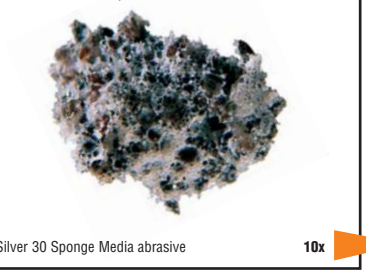
SPONGE-JET®

Sponge Media™ for Profiling and Abrading

REDUCE
90% OF THE DUST
90% OF THE REBOUND
90% OF THE WASTE™

Choose the perfect composite abrasive to satisfy the specification

Sponge-Jet offers standard and specialty abrasives, which can meet any specification while lowering the airborne dust, rebound and waste associated with conventional abrasives. Remove industrial coatings, abrade or profile up to 100+ microns (4+ mils). As a result save time, lower costs, accelerate blast and paint operations, and extend the coating life with high-quality surface preparation.



Silver 30 Sponge Media abrasive 10x

Silver 30DG Sponge Media abrasive 10x

Silver Sponge Media™

Combines one of the world's hardest and most effective abrasives (aluminum oxide - mohs hardness 9) with the durability and recyclability of Sponge Media and a range of grit sizes to address virtually every application.

SILVER SPONGE MEDIA TYPE	PROFILE	ABRASIVE AGENT
Silver 16 Sponge Media	**±100 micron (±4 mil)[A]**	**16-Grit Aluminum Oxide**
Silver 30 Sponge Media	**±75 micron (±3 mil)[A]**	**30-Grit Aluminum Oxide**
Silver 30DG[B] Sponge Media	**±75 micron (±3 mil)[A]**	**30-Grit Aluminum Oxide**
Silver 60 Sponge Media	**±63 micron (±2.5 mil)[A]**	**60-Grit Aluminum Oxide**
Silver 80 Sponge Media	**±50 micron (±2 mil)[A]**	**80-Grit Aluminum Oxide**
Silver 120 Sponge Media	**±25 micron (±1 mil)[A]**	**120-Grit Aluminum Oxide**
Silver 220 Sponge Media	**<25 micron (<1 mil)[A]**	**220-Grit Aluminum Oxide**
Silver 220DG[B] Sponge Media	**<25 micron (<1 mil)[A]**	**220-Grit Aluminum Oxide**
Silver Aero-Alox™ 320 Sponge Media	**<12 micron (<.5 mil)[A]**	**320-Grit Aluminum Oxide**
Silver Aero-Alox™ 320DG[B] Sponge Media	**<12 micron (<.5 mil)[A]**	**320-Grit Aluminum Oxide**

Red G-40 Sponge Media abrasive 10x

Red Sponge Media™

Used on heavily rusted steel or for the removal of thick or brittle coatings where removal by impact is required.

RED SPONGE MEDIA TYPE	PROFILE	ABRASIVE AGENT
Red G-40 Sponge Media	**100+micron (4+mil)[A]**	**G-40 Steel Grit**

Brown 80 Sponge Media abrasive 10x

Brown Sponge Media™

Used where the specification requires Starblast®. Effective on light to moderate rust, weathered coatings and old paint.

BROWN SPONGE MEDIA TYPE	PROFILE	ABRASIVE AGENT
Brown 80 Sponge Media	**50 micron (2 mil)[A]**	**80-Grit Dupont™ Starblast®**
Brown 80DG[B] Sponge Media	**50 micron (2 mil)[A]**	**80-Grit Dupont™ Starblast®**

[A]On mild carbon steel / [B]Double Grind (DG) Sponge Media™ abrasives are ground as finer whole particles, with no change to the abrasive.

Visit Sponge-Jet, Inc. at **www.spongejet.com** or call **603-431-6435** to learn more about the Sponge Blasting™ System

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SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Product name: Sponge-Jet® Silver Sponge Media™

Aluminum Oxide Sponge Blasting Media

Container size: Various

Relevant identified uses of the substance or mixture and uses advised against

Application: Abrasive

Details of the supplier of the safety data sheet

Manufacturer: Sponge-Jet, Inc.
14 Patterson Lane
Newington, NH 03801
Tel:1-603-610-7950

Responsible for material safety data sheet authoring: sjadmin@spongejet.com

Emergency telephone number

Emergency telephone: +1 (603) 610-7950 US Time EST. 9am – 5pm

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

NFPA Rating: Health:1 Fire:1 Reactivity:0 Other:-
HMIS Rating: Health:*1 Fire:1 Reactivity:0 Personal protection:B

B = Safety Glasses and Gloves.

OSHA 2012: The product is an article and are therefore not subject to classification and labeling.

Label elements

None.

Other hazards

Other: May irritate eyes and respiratory system. Prolonged or repeated contact may cause skin irritation.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

OSHA 2012:

%:	CAS-No.:	EC No.:	REACH Reg. No:	Chemical name:	Hazard classification:	Notes:
65-90	1344-28-1	215-691-6	01-2119529248-35-	Aluminum oxide	-	OEL
15-30	-	-	-	Polyurethane Elastomer	-	*
1-5	13463-67-7	236-675-5	01-2119489379-17-	Titanium dioxide	-	OEL
1-5	1309-37-1	215-168-2	01-2119457614-35-	Iron oxide	-	OEL

Notes: * (residual monomers: <0.005%)
OEL: Substance with national workplace exposure limits.

SECTION 4: FIRST AID MEASURES

Description of first aid measures

Inhalation: Move into fresh air. Seek medical attention as needed.

Skin contact: Wash with water. Seek medical attention as needed.

Eye contact: Immediately flush with plenty of water for up to 10 minutes. Seek medical attention as needed.

Ingestion: Get medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms/effects: See section 11 for more detailed information on health effects and symptoms.

Indication of any immediate medical attention and special treatment needed

Medical attention/treatments: Treat Symptomatically.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Extinguishing media: Extinguish with foam, carbon dioxide, dry powder or water fog.

Special hazards arising from the substance or mixture

Specific hazards: In case of fire very toxic fumes of hydrogen cyanide (prussic acid) and (NOx) may be formed.

Advice for firefighters

Protective equipment for fire-fighters: Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions:	Avoid inhalation of dust. Follow precautions for safe handling described in this safety data sheet.

Environmental precautions

Environmental precautions:	No special precautions.

Methods and material for containment and cleaning up

Spill Cleanup Methods:	Collect spillage with vacuum cleaner, shovel, broom or the like.

Reference to other sections

References:	For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Safe handling advice:	Avoid inhalation of dust and contact with skin and eyes.
Technical measures:	Use work methods which minimize dust production.
Technical precautions:	Mechanical ventilation or local exhaust ventilation may be required.

Conditions for safe storage, including any incompatibilities

Technical measures for safe storage:	No special precautions.
Storage conditions:	Store in a dry place.

Specific end use(s)

Specific use(s):	Abrasive

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational exposure limits:

CAS-No.:	Chemical name:	As:	Exposure limits:	Type:	Notes:	References:
1309-37-1	Iron oxide (Fe2O3), respirable fraction	-	5 mg/m3	TWA	A4	ACGIH
1344-28-1	α-Alumina, total dust	-	15 mg/m3	TWA	-	OSHA
1344-28-1	α-Alumina, respirable fraction	-	5 mg/m3	TWA	-	OSHA
13463-67-7	Titanium dioxide, total dust	-	15 mg/m3	TWA	-	OSHA
13463-67-7	Titanium dioxide	-	10 mg/m3	TWA	A4	ACGIH

Notes: A4: Not Classifiable as a Human Carcinogen.

Exposure controls

Engineering measures:	Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of dust. Provide easy access to water supply and eye wash facilities.
Personal protection:	Personal protection equipment should be chosen according to the relevant standards and in discussion with the supplier of the personal protective equipment.
Respiratory equipment:	OSHA or NIOSH approved supplied breathing air or approved respirator.
Hand protection:	Wear protective gloves suitable to protect for mechanical abrasions.
Eye protection:	Wear safety goggles for protection of abrasive materials.
Skin protection:	Wear appropriate clothing to prevent any possibility of skin contact.
Hygiene measures:	Wash hands after handling.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:	Solid.
Colour:	Silver with gray
Odor:	Slightly pungent odor.
Odor Threshold (ppm)	Not applicable.
pH:	None.
Melting point / freezing point:	None.
Boiling point:	None.
Flash point:	>200°C
Evaporation rate:	Not applicable.
Vapor pressure:	None.
Vapor density:	None.
Solubility:	Insoluble in water.
Partition coefficient (n-octanol/water):	Not applicable.
Explosive properties:	No static sensitivity to Sponge Media when dust concentration levels remain below 200 g/m3.

Other information

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Reactivity: None known.

Chemical stability

Stability: Stable under normal temperature conditions.

Possibility of hazardous reactions

Hazardous Reactions: None known.

Conditions to avoid

Conditions/materials to avoid: None known.

Incompatible materials

Incompatible materials: Sodium hypochlorite

Hazardous decomposition products

Hazardous decomposition products: Carbon dioxide, Carbon monoxide, Hydrogen cyanide, Isocyanates.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhalation:	Dust may irritate throat and respiratory system and cause coughing.
Skin contact:	Prolonged or repeated contact may cause irritation.
Eye contact:	May cause temporary eye irritation.
Ingestion:	Ingestion of large quantities may cause gastrointestinal irritation.
Specific effects:	Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.
Physical data comments:	Sensitization: Not applicable to finished product. Carcinogenicity: IARC Cancer Review: Group 2B for Titanium dioxide. IARC Cancer Review: Group 3 for Iron(III)Oxide Mutagenicity: Not known. Reproduction Toxicity: Not known.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity:	There are no data on the ecotoxicity of this product.

Persistence and degradability

Degradability:	The product consists mainly of inorganic compounds, which are not biodegradable.

Bioaccumulative potential

Bioaccumulative potential:	No data available on bioaccumulation.

Mobility in soil

Mobility:	Not known.

Results of PBT and vPvB assessment

PBT/vPvB:	Not known.

Other adverse effects

Other adverse effects:	None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements. Residues of unused product is not regarded as hazardous waste.

Waste from residues:	The product composition after use defines, if the product is hazardous waste.

SECTION 14: TRANSPORT INFORMATION

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, DOT).

UN number

UN-No: -

UN proper shipping name

Proper Shipping Name: -

Transport hazard class(es)

Class: -

Packing group

PG: -

Environmental hazards

Marine pollutant: -

Environmentally Hazardous substance: -

Special precautions for user

Special precautions: -

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Transport in bulk: -

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

TSCA: The ingredients of this product are on the TSCA Inventory.

SARA Section 302: None.

SARA (311/312) Hazard categories:
Acute Health: No.
Chronic Health: Yes.

SARA Section 313: None.

National regulation: State and local regulation may apply.

Threshold Limit Values (2014), ACGIH, by the American Conference on Governmental Industrial Hygienists.
The Code of Federal Regulation, Title 29, part 1910. Occupational Safety and Health Standards, Air contaminants (OSHA), with amendments.
International Agency for Research on Cancer (IARC): IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. Lyon: IARC, World Health Organization.
The Code of Federal Regulation. Title 40, part 355.50. Emergency Planning and Notification.
The Code of Federal Regulation. Title 40, part 372.65. Toxic Chemical Release Reporting: Community Right to Know.

Chemical Safety Assessment in compliance with Regulation (EC) No 1907/2006 (REACH)

CSA status: Not relevant.

SECTION 16: OTHER INFORMATION

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.
The following sections contain revisions or new statements: 2, 3.

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.

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