Air Quality Assessment

Logan Corporation, Inc.
AI # 2870

Prepared with the assistance of

Air Permit Renewal- Process Description and Emission Calculations
Logan Corporation, Inc. (AI 2870)

Process Description

Logan Corporation, Inc. is in the motor vehicle body manufacturing industry making and refurbishing custom dump truck beds. They currently hold a Conditional Major permit (F-18-061) expiring on July 11, 2024; they have requested ECAP's assistance to submit their air permit renewal.

In April 2021, the facility began operation of a Wheelabrator abrasive blasting cabinet using steel shot media to clean metal parts prior to spray coating. A dust collector (Camfil Farr Gold Series GS 20 Dust Extractor) is attached to control the emission of particulate matter. The facility is requesting a minor revision to add Insignificant Activity, IA06- Abrasive Blasting, to their air permit.

No additional regulations will apply to this activity. Also, no other changes have been made to the facility's equipment or operations.

Emission Calculations

Based on historic usage and operational data provided by the facility, actual rates were determined and then modified to represent potential usage rates for all emission point sources. For the following process, 8,760 hours per year was used as the potential operating time.

Insignificant Activity

IA06 – Abrasive Blasting

- Throughput: 1.54E-03 tons/hr
- Emission Factor Source: AP-42 Chapter 13.2.6; HAPs SDS% by weight
- Control: Dust Collector- Assume 98.00% control of PM, $PM_{10,}$ Manganese, and Nickel

Recommendation

Based on potential emission calculations and applicable requirements, the Environmental Compliance Assistance Program is recommending ***Logan Corporation*** apply for a ***Conditional Major Permit.*** Emission calculations for the new insignificant activity are below:

Facility-wide Emissions

Pollutant	Uncontrolled (TPY)	Controlled (TPY)
PM	1.23E-01	2.45E-03
PM_{10}	1.75E-02	3.50E-04
Manganese	1.47E-03	2.94E-05
Nickel	2.45E-04	4.91E-06
Total HAPs	1.72E-03	3.43E-05

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007AI

Administrative Information

___ Section AI.1: Source Information

___ Section AI.2: Applicant Information

___ Section AI.3: Owner Information

___ Section AI.4: Type of Application

___ Section AI.5: Other Required Information

___ Section AI.6: Signature Block

___ Section AI.7: Notes, Comments, and Explanations

Additional Documentation

___ Additional Documentation attached

Source Name: **Logan Corporation, Inc**

KY EIS (AFS) #: **21- 153-00031**

Permit #: **F-18-061**

Agency Interest (AI) ID: **2870**

Date: **12/5/2023**

Section AI.1: Source Information

Physical Location Address:	**Street:**	124 Ward Rd					
	City:	Salyersville	**County:**	Magoffin	**Zip Code:**	41465	
Mailing Address:	**Street or P.O. Box:**	Same as above					
	City:		**State:**		**Zip Code:**		

Standard Coordinates for Source Physical Location

Longitude: -83.061111 (decimal degrees) **Latitude:** 37.743889 (decimal degrees)

Primary (NAICS) Category: Machinery Manufacturing **Primary NAICS #:** 336211

Classification (SIC) Category: Truck and Bus Bodies **Primary SIC #:** 3713

Briefly discuss the type of business conducted at this site: Logan Corporation, Inc. is in the motor vehicle body manufacturing industry making and refurbishing custom dump truck beds.

Description of Area Surrounding Source: ☑ Rural Area ☐ Industrial Park ☐ Residential Area ☐ Urban Area ☐ Industrial Area ☐ Commercial Area

Is any part of the source located on federal land? ☐ Yes ☑ No

Number of Employees: 95

Approximate distance to nearest residence or commercial property: *850ft*

Property Area: 12.5 acres

Is this source portable? ☐ Yes ☑ No

What other environmental permits or registrations does this source currently hold or need to obtain in Kentucky?

NPDES/KPDES:	☑ Currently Hold	☐ Need	☐ N/A
Solid Waste:	☐ Currently Hold	☐ Need	☑ N/A
RCRA:	☑ Currently Hold	☐ Need	☐ N/A
UST:	☐ Currently Hold	☐ Need	☑ N/A

Type of Regulated Waste Activity:

☐ Mixed Waste Generator ☑ Generator ☐ Recycler ☐ Other: _____

☐ U.S. Importer of Hazardous Waste ☐ Transporter ☐ Treatment/Storage/Disposal Facility ☐ N/A

Section AI.2: Applicant Information

Applicant Name: Logan Corporation Inc

Title: (if individual)

Mailing Address: **Street or P.O. Box:** 124 Ward Rd.
City: Salyersville **State:** KY **Zip Code:** 41465

Email: (if individual) Randy.Risner@logancorp.com

Phone: 606-791-4532

Technical Contact

Name: Allison Hall

Title: Environmental Scientist Advisor

Mailing Address: **Street or P.O. Box:** 300 Sower Blvd.
City: Frankfort **State:** KY **Zip Code:** 40601

Email: allison.hall@ky.gov

Phone: 502-782-8099

Air Permit Contact for Source

Name: Randy Risner

Title: Vice President

Mailing Address: **Street or P.O. Box:** 124 Ward Rd.
City: Salyersville **State:** KY **Zip Code:** 41465

Email: Randy.Risner@logancorp.com

Phone: 606-791-4532

Section AI.3: Owner Information

☑ **Owner same as applicant**

Name:

Title:

Mailing Address: **Street or P.O. Box:**

City: **State:** **Zip Code:**

Email:

Phone:

List names of owners and officers of the company who have an interest in the company of 5% or more.

Name	Position
Clarence England	CEO

Section AI.4: Type of Application

Current Status: ☐ Title V ☑ Conditional Major ☐ State-Origin ☐ General Permit ☐ Registration ☐ None

Requested Action: *(check all that apply)*

☐ Name Change	☐ Initial Registration	☐ Significant Revision	☐ Administrative Permit Amendment
☑ Renewal Permit	☐ Revised Registration	☑ Minor Revision	☐ Initial Source-wide OperatingPermit
☐ 502(b)(10)Change	☐ Extension Request	☐ Addition of New Facility	☐ Portable Plant Relocation Notice
☐ Revision	☐ Off Permit Change	☐ Landfill Alternate Compliance Submittal	☐ Modification of Existing Facilities
☐ Ownership Change	☐ Closure		

Requested Status: ☐ Title V ☑ Conditional Major ☐ State-Origin ☐ PSD ☐ NSR ☐ Other: _____

Is the source requesting a limitation of potential emissions? ☑ Yes ☐ No

Pollutant:	Requested Limit:	Pollutant:	Requested Limit:
☐ Particulate Matter		☑ Single HAP	9 tons/yr
☑ Volatile Organic Compounds (VOC)	90 tons/yr	☑ Combined HAPs	22.5 ton/syr
☐ Carbon Monoxide		☐ Air Toxics (40 CFR 68, Subpart F)	
☐ Nitrogen Oxides		☐ Carbon Dioxide	
☐ Sulfur Dioxide		☐ Greenhouse Gases (GHG)	
☐ Lead		☐ Other	

For New Construction:

Proposed Start Date of Construction: *(MM/YYYY)* Existing

Proposed Operation Start-Up Date: *(MM/YYYY)* Existing

For Modifications:

Proposed Start Date of Modification: *(MM/YYYY)* 04/2021

Proposed Operation Start-Up Date: *(MM/YYYY)* 04/2021

Applicant is seeking coverage under a permit shield. ☐ **Yes** ☑ **No**

Identify any non-applicable requirements for which permit shield is sought on a separate attachment to the application.

Section AI.5 Other Required Information

Indicate the documents attached as part of this application:

- ☐ DEP7007A Indirect Heat Exchangers and Turbines
- ☐ DEP7007B Manufacturing or Processing Operations
- ☐ DEP7007C Incinerators and Waste Burners
- ☐ DEP7007F Episode Standby Plan
- ☐ DEP7007J Volatile Liquid Storage
- ☐ DEP7007K Surface Coating or Printing Operations
- ☐ DEP7007L Mineral Processes
- ☐ DEP7007M Metal Cleaning Degreasers
- ☑ DEP7007N Source Emissions Profile
- ☐ DEP7007P Perchloroethylene Dry Cleaning Systems
- ☐ DEP7007R Emission Offset Credit
- ☐ DEP7007S Service Stations
- ☐ DEP7007T Metal Plating and Surface Treatment Operations
- ☐ DEP7007V Applicable Requirements and Compliance Activities
- ☐ DEP7007Y Good Engineering Practice and Stack Height Determination
- ☐ DEP7007AA Compliance Schedule for Non-complying Emission Units
- ☐ DEP7007BB Certified Progress Report
- ☐ DEP7007CC Compliance Certification
- ☑ DEP7007DD Insignificant Activities
- ☐ DEP7007EE Internal Combustion Engines
- ☐ DEP7007FF Secondary Aluminum Processing
- ☑ DEP7007GG Control Equipment
- ☐ DEP7007HH Haul Roads
- ☐ Confidentiality Claim
- ☐ Ownership Change Form
- ☐ Secretary of State Certificate
- ☐ Flowcharts or diagrams depicting process
- ☐ Digital Line Graphs (DLG) files of buldings, roads, etc.
- ☐ Site Map
- ☐ Map or drawing depicting location of facility
- ☐ Safety Data Sheet (SDS)
- ☐ Emergency Response Plan
- ☐ Other: _____

Section AI.6: Signature Block

I, the undersigned, hereby certify under penalty of law, that I am a responsible official*, and that I have personally examined, and am familiar with, the information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.

Randy Risner
Authorized Signature

1-10-24
Date

Randy Risner
Type or Printed Name of Signatory

Vice President
Title of Signatory

*Responsible official as defined by 401 KAR 52:001.

Section AI.7: Notes, Comments, and Explanations

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007N

Source Emissions Profile

__ Section N.1: Emission Summary
__ Section N.2: Stack Information
__ Section N.3: Fugitive Information
__ Section N.4: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI

Source Name: Logan Corporation, Inc
KY EIS (AFS) #: 21- 153-00031
Permit #: F-18-061
Agency Interest (AI) ID: 2870
Date: 12/5/2023

N.1: Emission Summary

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
IA06	Abrasive Blasting	N/A	N/A	Dust Collector	1	1	1.54.E-03 ton/hr	PM	18.20 lb/ton	AP-42 Chapter 13.2.6	100.00%	98.00%	2.80E-02	5.60E-04	1.23E-01	2.45E-03
								PM10	2.60 lb/ton	AP-42 Chapter 13.2.6	100.00%	98.00%	4.00E-03	8.00E-05	1.75E-02	3.50E-04
								Manganese	2.18E-01 lb/ton	HAPs SDS% by weight	100.00%	98.00%	3.36E-04	6.72E-06	1.47E-03	2.94E-05
								Nickel	3.64E-02 lb/ton	HAPs SDS% by weight	100.00%	98.00%	5.60E-05	1.12E-06	2.45E-04	4.91E-06

Section N.2: Stack Information

UTM Zone:

Stack ID	Identify all Emission Units (with Process ID) and Control Devices that Feed to Stack	Stack Physical Data			Stack UTM Coordinates		Stack Gas Stream Data		
		Equivalent Diameter *(ft)*	Height *(ft)*	Base Elevation *(ft)*	Northing *(m)*	Easting *(m)*	Flowrate *(acfm)*	Temperature *(° F)*	Exit Velocity *(ft/sec)*
1	Connected to Dust Collector; IA06 Abrasive Blasting	1.85	18.4	854	4179523.325	318380.747	8800 cfm	Ambient	Unknown

Section N.3: Fugitive Information

UTM Zone:

Emission Unit #	Emission Unit Name	Process ID	Area Physical Data		Area UTM Coordinates		Area Release Data	
			Length of the X Side *(ft)*	Length of the Y Side *(ft)*	Northing *(m)*	Easting *(m)*	Release Temperature *(°F)*	Release Height *(ft)*
N/A								

Section N.4: Notes, Comments, and Explanations
Stack- The cleaned air from the dust collector is exhausted through the fan outlet vent to the atmosphere.

Division for Air Quality
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Frankfort, KY 40601
(502) 564-3999

DEP7007DD

Insignificant Activities

___ Section DD.1: Table of Insignificant Activities
___ Section DD.2: Signature Block
___ Section DD.3: Notes, Comments, and Explanations

Source Name: Logan Corp
KY EIS (AFS) #: 21- 153-00031
Permit #: F-18-061
Agency Interest (AI) ID: 2870
Date: 12/5/2023

Section DD.1: Table of Insignificant Activities

*Identify each activity with a unique Insignificant Activity number (IA #); for example: 1, 2, 3… etc.

Insignificant Activity #	Description of Activity including Rated Capacity	Serial Number or Other Unique Identifier	Applicable Regulation(s)	Calculated Emissions
IA06	Abrasive blasting using steel shot - Max capacity: 1.54E-3 tons/hr	SN #601607	401 KAR 59:010;401 KAR 63:020	Controlled PM:2.45E-03 tons/yr
				Controlled PM10: 3.50E-04 tons/yr
				Controlled Manganese: 2.94E-05 tons/yr
				Controlled Nickel: 4.91E-06 tons/yr

Insignificant Activity #	Description of Activity including Rated Capacity	Serial Number or Other Unique Identifier	Applicable Regulation(s)	Calculated Emissions

Section DD.2: Signature Block

I, THE UNDERSIGNED, HEREBY CERTIFY UNDER PENALTY OF LAW, THAT I AM A RESPONSIBLE OFFICIAL, AND THAT I HAVE PERSONALLY EXAMINED, AND AM FAMILIAR WITH, THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ITS ATTACHMENTS. BASED ON MY INQUIRY OF THOSE INDIVIDUALS WITH PRIMARY RESPONSIBILITY FOR OBTAINING THE INFORMATION, I CERTIFY THAT THE INFORMATION IS ON KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE OR INCOMPLETE INFORMATION, INCLUDING THE POSSIBILITY OF FINE OR IMPRISONMENT.

	Authorized Signature	Date
By:	Randy Risner	1-10-24
	Type/Print Name of Siguatory	Title of Siguatory
	Randy Risner	Vice President

Section DD.3: Notes, Comments, and Explanations

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007GG

Control Equipment

Additional Documentation

___ Complete Sections GG.1 through GG.12, as applicable

___ Attach manufacturer's specifications for each control device

___ Complete DEP7007AI

Source Name: Logan Corporation, Inc

KY EIS (AFS) #: 21- 153-00031

Permit #: F-18-061

Agency Interest (AI) ID: 2870

Date: 12/5/2023

Section GG.1: General Information - Control Equipment

Control Device ID #	Control Device Name	Cost	Manufacturer	Model Name/ Serial #	Date Installed	Inlet Gas Stream Data For All Control Devices					Inlet Gas Stream Data For Condensers, Adsorbers, Afterburners, Incinerators, Oxidizers Only			Equipment Operational Data For All Control Devices		
						Temperature (°F)	Flowrate (scfm @ 68 °F)	Average Particle Diameter (μm)	Particle Density (lb/ft^3) or Specific Gravity	Gas Density (lb/ft^3)	Gas Moisture Content (%)	Gas Composition	Fan Type	Pressure Drop Range ($in. H_2O$)	Pollutants Collected/ Controlled	Pollutant Removal (%)
1	Dust Collector	Unknown	Camfil	Gold Series- 20	Apr-21	Ambient	8800 cfm	Unknown	Unknown	Unknown	N/A	N/A	N/A	Unknown	PM,PM10, Manganese, Nickel	98.00

Section GG.6: Filter

Control Device ID #	Identify all Emission Units and Control Devices that Feed to Filter	Identify Type of Filter Unit: Baghouse, Cartridge Collector, or Other (specify)	Identify Type of Filtering Material: Fabric, Paper, Synthetic, or Other (specify)	Total Filter Area *(ft²)*	Effective Air-to-Filter Ratio *(acfm/ft²)*	Continuous Monitoring Instrumentation (e.g. COMS, BLDS, none)	Additional Materials Introduced into the Control System (e.g. lime, carbon)		Identify Cleaning Method: Shaker, Pulse Air, Reverse Air, Pulse Jet, or Other (specify)	Identify Gas Cooling Method: Ductwork, Heat Exchanger, Bleed-in Air, Water Spray, or Other (specify)	For Ductwork:		For Bleed-in Air:	For Water Spray:
							Material	Injection Rate *(lb/hr)*			Length *(ft)*	Diameter *(ft)*	Flowrate *(scfm @ 68°F)*	Flowrate *(gal/min)*
1	IA06	Collector	Cellulose	1968	4.47	None	None Known	N/A	Pulse Air	Unknown	N/A	N/A	N/A	N/A

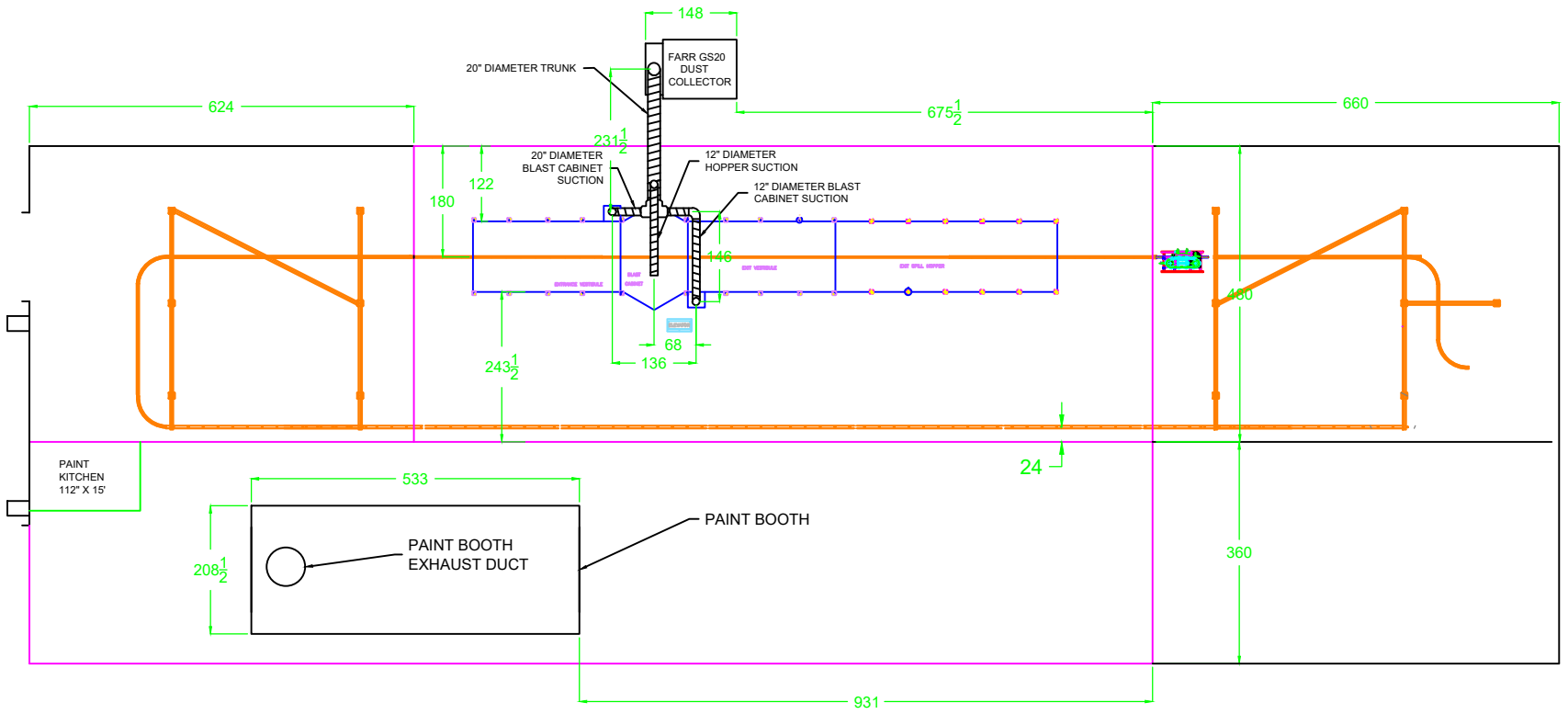
Name:Logan Corporation, Inc.			AI # 2870										
							Emission Factors			Uncontrolled		Controlled	
Identification	Description	Material	Throughput	Units	Hours	Pollutant	EF	Units	Control	lb/hr	TPY	lb/hr	TPY
Name	Insignificant Activity - Abrasive Blasting												
EIS Point	IA06	Steel Shot	1.54E-03	ton/hr	8760	PM	18.20	lb/ton	98.00%	2.80E-02	1.23E-01	5.60E-04	2.45E-03
SCC	3-09-002-07					PM_{10}	2.60	lb/ton	98.00%	4.00E-03	1.75E-02	8.00E-05	3.50E-04
Reg	401 KAR 59:010;401 KAR 63:020					Manganese	2.18E-01	lb/ton	98.00%	3.36E-04	1.47E-03	6.72E-06	2.94E-05
Stack #	1					Nickel	3.64E-02	lb/ton	98.00%	5.60E-05	2.45E-04	1.12E-06	4.91E-06
Height	18’5”	Steel Shot Usage Yearly	4.00	ton/yr									
Diameter	23.5"												
Flowrate	8800 cfm	Actual Working Hours Yearly	2600	hours									
Temp	Ambient												
Date	April 2021 Installation												
Control	Dust Collector 98.00%												
EF Reference	AP-42 Chapter 13.2.6; HAPs SDS% by weight												
Notes:	Wheelabrator Blast Cabinet												

Abrasive Blasting Pollutants

Product	Manufacturer	Density	Manganese	Nickel
		lb/ft3	%	%
Amasteel- Steel Shot	Ervin	487	1.20%	0.20%

Facility-wide Emissions

Pollutant	Uncontrolled (TPY)	Controlled (TPY)
PM	1.23E-01	2.45E-03
PM_{10}	1.75E-02	3.50E-04
Manganese	1.47E-03	2.94E-05
Nickel	2.45E-04	4.91E-06
Total HAPs	1.72E-03	3.43E-05



REV	DESCRIPTION	BY:	DATE

REVISIONS

TOLERANCES
UNLESS OTHERWISE SPECIFIED

DIMENSIONS IN INCHES

x/x = ± 1/16
.x = ± .030
.xx = ± .020
.xxx = ± .010
.xxxx = ± .005
ANGLE = ± 1/2°
CONCENTRICITY = .010 TIR
SURFACE = 125√

MATERIAL NOTE

FINISH NOTE

CUSTOMER ITEM NUMBER:

LOGAN ITEM NUMBER

LOGAN CORPORATION
SUPPLIES MANUFACTURING SERVICE EQUIPMENT

TITLE
DUST COLLECTOR AND
PAINT BOOTH LAYOUT

SCALE	DRAWN BY	APPROVED BY	DATE
N/S			3/18/21

DRAWING NO. N/A

SHEET 1/1

REV N/A

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/15/2023 *Reviewed on 05/11/2022*

1 Identification

Product identifier
Trade name: AMASTEEL

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Ervin Industries, Inc.
3893 Research Park Drive
Ann Arbor, MI 48108-2217
Phone: (734)-769-4600/Fax: (734)-663-0136
sales@ervinindustries.com
http://www.ervinindustries.com
Information department:
Quality Assurance Department
(mo-thu: 8 a.m.-4 p.m., fr: 8 a.m. - 1 p.m.)

Emergency telephone number: *Phone: (734)-769-4600/Fax: (734)-663-0136*
EUPCS: *PC-TEC-12*

2 Hazard(s) identification

Classification of the substance or mixture
The product is not classified, according to the Globally Harmonized System (GHS).

Label elements
GHS label elements *Void*
Hazard pictograms *Void*
Signal word *Void*
Hazard statements *Void*
Classification system:
NFPA ratings (scale 0 - 4)
Health = 0
Fire = 0
Reactivity = 0
HMIS-ratings (scale 0 - 4)
Health = 0
Fire = 0
Reactivity = 0
Other hazards
Results of PBT and vPvB assessment
PBT: *Not applicable.*
vPvB: *Not applicable.*

3 Composition/information on ingredients

Chemical characterization: Mixtures
Description: *Mixture: consisting of the following components.*

Dangerous components:		
7440-44-0	*carbon*	*0.80-1.20%*
7439-96-5	*manganese*	*0.35-1.20%*
7440-21-3	*silicon*	*0.40-1.50%*
7704-34-9	*sulfur*	*<0.05%*
7440-02-0	*Nickel*	*<0.2%*

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/15/2023 *Reviewed on 05/11/2022*

Trade name: Amasteel

(Contd. of page 1)

7723-14-0	*red phosphorus*	*<0.05%*

4 First-aid measures

Description of first aid measures
General information: *No special measures required.*
After inhalation:
Supply fresh air; consult doctor in case of complaints.
In case of unconsciousness place patient stably in side position for transportation.
After skin contact:
Rinse with warm water.
If skin irritation continues, consult a doctor.
After eye contact:
Rinse opened eye for several minutes under running water.
Consult a doctor.
After swallowing:
Rinse out mouth and then drink plenty of water.
If symptoms persist consult doctor.
Information for doctor:
Most important symptoms and effects, both acute and delayed *No further relevant information available.*
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents:
CO2, sand, extinguishing powder. Do not use water.
Use fire fighting measures that suit the environment.
For safety reasons unsuitable extinguishing agents: *Water*
Special hazards arising from the substance or mixture
Product is not flammable.
Fine metal dust removed as a waste stream and / or contamination during the blasting process, poses a small minor risk of causing a fire or explosion.
Advice for firefighters
Protective equipment: *No special measures required.*

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Scrap and debris can cause slip and fall hazards. It is recommended that floors and work areas be kept clean at all times.
floors and work areas clean at all times.
Environmental precautions: *No special measures required.*
Methods and material for containment and cleaning up: *Pick up mechanically.*
Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
None
None

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

(Contd. of page 2)

Protective Action Criteria for Chemicals

PAC-1:		
7439-96-5	manganese	3 mg/m³
7440-21-3	silicon	45 mg/m³
7440-44-0	carbon	6 mg/m³
7723-14-0	red phosphorus	0.27 mg/m³
7440-02-0	Nickel	6 mg/m³
PAC-2:		
7439-96-5	manganese	5 mg/m³
7440-21-3	silicon	100 mg/m³
7440-44-0	carbon	330 mg/m³
7723-14-0	red phosphorus	3 mg/m³
7440-02-0	Nickel	330 mg/m³
PAC-3:		
7439-96-5	manganese	1,800 mg/m³
7440-21-3	silicon	630 mg/m³
7440-44-0	carbon	2,000 mg/m³
7723-14-0	red phosphorus	18 mg/m³
7440-02-0	Nickel	2,000 mg/m³

7 Handling and storage

Handling:
Precautions for safe handling
Take special care to prevent the product from leaking. Exercise special care when removing the tie-down straps that are part of the bulk pallet shipments.
Information about protection against explosions and fires: *No special measures required.*

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: *No special requirements.*
Information about storage in one common storage facility: *Not required.*
Further information about storage conditions: *None.*
Storage class: *13*
Specific end use(s) *No further relevant information available.*

8 Exposure controls/personal protection

Additional information about design of technical systems: *No further data; see item 7.*

Control parameters
Components with limit values that require monitoring at the workplace:
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Amasteel

(Contd. of page 3)

7439-96-5 manganese	
PEL	Ceiling limit value: 5 mg/m³ as Mn
REL	Short-term value: 3 mg/m³ Long-term value: 1 mg/m³ fume, as Mn
TLV	Long-term value: 0.02* 0.1** mg/m³ as Mn; A4, *respirable **inhalable fraction
7440-21-3 silicon	
PEL	Long-term value: 15* 5** mg/m³ *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m³ *total dust **respirable fraction
TLV	TLV withdrawn

Regulatory information
PEL: Guide to Occupational Exposure Values (OSHA PELs)
REL: Guide to Occupational Exposure Values (NIOSH RELs)
TLV: Guide to Occupational Exposure Values (TLV)
Additional information: *The lists that were valid during the creation were used as basis.*

Exposure controls
Personal protective equipment:
Breathing equipment:
Use suitable respiratory protective device in case of insufficient ventilation.
Filter P2
Protection of hands: *Leather gloves*
Material of gloves *Recommended thickness of the material: ≥ - mm*
Penetration time of glove material *Value for the permeation: Level ≤ -*
Eye protection: *Safety glasses*
Body protection: *Protective work clothing*

9 Physical and chemical properties

Information on basic physical and chemical properties	
General Information	
Appearance:	
Form:	*Solid*
Odor:	*Odorless*
Odor threshold:	*Not determined.*
pH-value:	*Not applicable.*
Change in condition	
Melting point/Melting range:	*1500 °C (2,732 °F) (~2700 °F)*
Boiling point/Boiling range:	*3000 °C (5,432 °F) (~5400 °F)*
Flash point:	*Not applicable.*
Flammability (solid, gaseous):	*Not determined.*
Decomposition temperature:	*Not determined.*
Auto igniting:	*Product is not selfigniting.*
Danger of explosion:	*Product does not present an explosion hazard.*

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Explosion limits:	
Lower:	*Not determined.*
Upper:	*Not determined.*
Vapor pressure:	*Not applicable.*
Density at 20 °C (68 °F):	*7.8 g/cm³ (65.09 lbs/gal)*
Relative density	*Not determined.*
Vapor density	*Not applicable.*
Evaporation rate	*Not applicable.*
Solubility in / Miscibility with	
Water:	*Insoluble.*
Partition coefficient (n-octanol/water):	*Not determined.*
Viscosity:	
Dynamic:	*Not applicable.*
Kinematic:	*Not applicable.*
Solvent content:	
VOC content:	*0.00 %*
Solids content:	*100.0 %*
Other information	*No further relevant information available.*

10 Stability and reactivity

Reactivity *No further relevant information available.*
Chemical stability
Thermal decomposition / conditions to be avoided: *No decomposition if used according to specifications.*
Possibility of hazardous reactions *No dangerous reactions known.*
Conditions to avoid *No further relevant information available.*
Incompatible materials: *No further relevant information available.*
Hazardous decomposition products: *No dangerous decomposition products known.*

11 Toxicological information

Information on toxicological effects
Acute toxicity:
Primary irritant effect:
on the skin: *No irritant effect.*
on the eye: *No irritating effect.*
Sensitization:
Examination nickel release in accordance with DIN EN 1811: 2012-10: done
Sample Number 2016-00916
<0.1 µg per cm2 and week
therefore no sensitization detected
Additional toxicological information:
The product is not subject to classification according to internally approved calculation methods for preparations:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

Carcinogenic categories

IARC (International Agency for Research on Cancer)		
7440-02-0	*Nickel*	*1*

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NTP (National Toxicology Program)		
7440-02-0	*Nickel*	*R*

OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

12 Ecological information

Toxicity
Aquatic toxicity: *No further relevant information available.*
Persistence and degradability *No further relevant information available.*
Behavior in environmental systems:
Bioaccumulative potential *No further relevant information available.*
Mobility in soil *No further relevant information available.*
Additional ecological information:
General notes: *Not hazardous for water.*
Results of PBT and vPvB assessment
PBT: *Not applicable.*
vPvB: *Not applicable.*
Other adverse effects *No further relevant information available.*

13 Disposal considerations

Uncleaned packagings:
Recommendation:
Disposal must be made according to official regulations.
completely emptied packaging in 25kg paper bag: paper recycling
completely emptied packaging in big bags: commercial waste disposal
completely emptied packaging in steel barrels: metal recycling

14 Transport information

UN-Number **DOT, ADR, ADN, IMDG, IATA**	*Void*
UN proper shipping name **DOT, ADR, ADN, IMDG, IATA**	*Void*
Transport hazard class(es) **DOT, ADR, ADN, IMDG, IATA** **Class**	*Void*
Packing group **DOT, ADR, IMDG, IATA**	*Void*
Environmental hazards:	*Not applicable.*
Special precautions for user	*Not applicable.*
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	*Not applicable.*

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Trade name: Amasteel

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UN "Model Regulation":	*Void*

15 Regulatory information

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

Section 355 (extremely hazardous substances):	
7723-14-0	*red phosphorus*

Section 313 (Specific toxic chemical listings):	
7439-96-5	*manganese*
7723-14-0	*red phosphorus*

TSCA (Toxic Substances Control Act):
All components have the value ACTIVE.

Hazardous Air Pollutants	
7439-96-5	*manganese*
7723-14-0	*red phosphorus*

Proposition 65
Warning: This product can expose you to chemicals including Nickel, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

Chemicals known to cause cancer:	
7440-02-0	*Nickel*

Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.

Chemicals known to cause developmental toxicity:
None of the ingredients is listed.

Cancerogenity categories

EPA (Environmental Protection Agency)		
7439-96-5	*manganese*	*D*
7723-14-0	*red phosphorus*	*D*

TLV (Threshold Limit Value)
None of the ingredients is listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients is listed.

GHS label elements *Void*
Hazard pictograms *Void*
Signal word *Void*
Hazard statements *Void*

National regulations:

Information about limitation of use: *Employment restrictions concerning young persons must be observed.*
Water hazard class: *Generally not hazardous for water.*

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Chemical safety assessment: *A Chemical Safety Assessment has not been carried out.*

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Motivo da mudança:
Version 2: 28.05.2015: Section 5.1 Extinguishing agents; 8.1 AGW measuring method.
Version 3: 06.09.2015: Section 1, 15, adaptation to the regulation 453/2015/EC, 830/2015/EU, 18/2012/EU
Version 4: 05.03.2016: Section 1.3
Version 5: 19.06.2016: Section 13
Version 6: 07.06.2019: Section 3, 8
Version 7: 16.02.2020: Section 13
Version 8: 18.02.2021: Section 1, 13, 15
Version 9: 11.05.2022: Section 2, 8, 15

Contact: *Dr. W. Assmann*
Date of preparation / last revision *01/15/2023*
Abbreviations and acronyms:
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
*** Data compared to the previous version altered.** *Amasteel*
Safety Data Sheet: *AMASTEEL*

Camfil Farr Gold Series GS 20 Dust Extractor

Stock Code: EB1931S
Manufacturer: Camfil Farr
Model: GS 20
Year of Manufacture: 2014
Serial: 301682
New or Used: Used (Second Hand)
Approx Duty CFM / M³/Hr : 8,800 CFM //15,000m3hr
Filter Area ft² / m²: 5950 // 600
Other Info: ATEX Rated, 22kW Roof Mounted Fan
Weight: 2722
External Dimensions (WxDxH): 2,283 x 3,293 x 4,363

Camfil Farr Gold Series 20 Cartridge Dust Extractor

The ATEX-classified Camfil APC Dust Collector is designed for collecting and filtering ex- plosive and non-explosive dry dust.

The Gold Series® industrial dust collector rids work environments of hazardous and nuisance dust and fumes/smoke with the smallest floor space of any collector available today. Heavy-duty carbon steel construction and thermal cured powder coatings provide unparalleled strength and durability.

Camfil Farr Gold Series GS 20 Dust Extractor

Technical Detail

EX rating: II 2/3 DGX (Atex)
Maximum Temperature: 90°c
Filter Area: 600m² // 1968ft²
Filter Cartridge: PolyTech 30 m²
Filter Material: Cellulose
Operating Temperature: - 20 ºC to + 40 ºC
Process Air (Dry) Temperature: 0 ºC to +70 ºC (+90 ºC depending on filter media)
Solenoids: 10 off
Environment Classes: C3 according to EN ISO 12944
Compressed Air Requirements: See page 22 (Installation & operation guide attached)
Compressed Air Connection: Minimum 1" (R25)
Protection Class: IP 65 (for Camfil APC Control System)*
Relay Voltage, Option: 24 V AC
Working Pressure: 0 kPa to - 10 kPa
Sound Power: 1", 1,5" valves. 9,2 B, 9,4 DB

Atex Equipment category 2 D/G: applicable to the interior of the product3 D/G X: applicable to the exterior of the product Marking. EX II 2/3 D/G T2 90 ºC

Definitions

m3/h
Actual m3 of gas per hour. The volume of gas flowing per hour at the operating temperature, pressure, elevation and composition.

Air-to-Cloth Ratio The ratio between air flowing through a dust collector and the m2 of filter area available (m3/m2 h). Sometimes referred to as the velocity (m/h) of air through the cloth.

Blinding
Blockage in a fabric or media by dust that cannot be discharged by the cleaning mechanism, resulting in a reduced gas flow and an increased pressure drop across the media. Once enough material has built up, airflow is severely restricted and the bags have to be cleaned or replaced.

Bridging
Material handling problem characterized by the particulate forming a cavity over the discharge or opening of a hopper or storage vessel. Also, the accumulation of collected dust between two or more filter elements.

Clean Air Plenum
The dust collector area, through which gases are directed, located on the clean side of the filter media.

Collection Efficiency
The measure of a dust collector's ability to remove particulate from the inlet gas, typically expressed in percent or emission rate (mg per cubic meter).

Camfil Farr Gold Series GS 20 Dust Extractor

Dew Point
The temperature at which condensation begins to form as the gas is cooled.

Differential Pressure
The change in pressure or the pressure drop across a device. The difference between static pressures measured at the inlet and outlet of a device,
Ref. Pressure Drop.

Dust Cake
A dust build-up on the filter elements that increases the efficiency of the filter media.

Diaphragm Valve
A compressed air valve operated by a solenoid valve that opens to allow a pulse to a row of filters.

Dust Loading
The weight of solid particulate suspended in an air stream, usually expressed in mg per cubic meter.

Emissions
Particulate that escapes through or around a dust collector into the atmosphere.

Negative Pressure System
A system where the fan is located after the dust collector on the clean air side, pulling air through the system.

Positive Pressure System
A system with a fan located prior to a dust collector on the dirty side, pushing air through the system.

Precoat
Material added to the air stream at start-up to aid in establishing the initial dust cake on the filter media.

Rotary Airlock Valve
Device having a star wheel (rotor) designed to provide an air tight seal between the negative or positive pressures of the collector and the outside atmosphere.

Screw Conveyor
A revolving screw operating in a fixed trough for conveying material from one point to another.

Pulse Duration (On-Time)
The length of time a pulse lasts, generally described as the length of time the electric signal holds the solenoid pilot valve open (fixed at 150m/s).

Pause Time (Off-Time)
Elapsed time between pulses in a dust collector cleaning system.

Solenoid Valve
An electromechanical plunger device that is either “normally open” or “normally closed”. In use with a dust collector, it is for the relief of air pressure to activate a compressed air device such as a diaphragm valve.

Camfil Farr Gold Series GS 20 Dust Extractor

Tube Sheet
A steel plate on which the open end of the filter elements are connected. This wall separates the clean air and dirty air plenums of the dust collector.

View Camfil Farr Gold Series GS 20 Dust Extractor on our web site at
https://www.rileysurfaceworld.co.uk/machines/30947.htm

PHOTOGRAPHS TAKEN PRIOR TO REFURBISHMENT.