ONYX

SDS

SAFETY DATA SHEET

ONYX DX15 Floor Scrubber — Built-In $LiFePO_4$ Battery System

Prepared in accordance with the Globally Harmonized System (GHS) — 11th Revised Edition and the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200).

SECTION 1 IDENTIFICATION

Product Name	ONYX DX15 Floor Scrubber — Built-In $LiFePO_4$ Battery System
Product Identifier	DX15 / GT2450
Battery Specifications	25.6 V · 50 Ah · 1280 Wh — lithium iron phosphate ($LiFePO_4$) battery, built into the DX15 floor scrubber
CAS No. / EC No.	Not applicable (article / manufactured equipment with integrated battery)
Recommended Use	Commercial floor scrubber powered by an integrated rechargeable $LiFePO_4$ battery pack. Intended for use with ONYX-authorized accessories only.
Uses Advised Against	Any use other than the intended application. Do not open, modify, or repurpose the battery. Do not use a damaged machine.

Company Identification — Supplier / Responsible Party

Company	ONYX Systems, LLC (d/b/a ONYX Solutions)
Address	12605 Commerce Station Drive, Suite 700, Huntersville, NC 28078, USA
Telephone	+1 704-827-9368
E-mail	sales@onyxsolutions.com
Website	https://www.onyxsolutions.com

Emergency Phone	+1 704-827-9368 (Mon–Fri, business hours, ET)
Manufacturer (data source)	Battery system manufactured by Gatling Intelligent Equipment (Wuxi) Co., Ltd., Wuxi City, Jiangsu Province, China. Technical data in this SDS is derived from the manufacturer's documentation.

SECTION 2 HAZARDS IDENTIFICATION

This product is an article (manufactured floor-scrubbing equipment with an integrated battery). Under GHS and OSHA HazCom (29 CFR 1910.1200), articles are generally outside the scope of classification and labeling. The information below applies to battery contents if a cell is damaged, opened, short-circuited, overheated, or otherwise abused.

GHS Classification	Not classified (article).
Signal Word	None
Pictogram	None
Hazard Statements	None under normal conditions of use.

Precautionary Statements

Prevention	Do not open or disassemble. Do not expose to high temperatures or open fire. Do not mix with batteries of varying sizes, chemistries, or types. Avoid mechanical/external impact to the machine or battery.
Response	Not applicable under normal use.

Storage	Store under roof in a cool, dry, well-ventilated area.
Disposal	Dispose of contents/container in accordance with local, regional, national, and international regulations.

Other hazards: Lithium-ion cells can present a fire, explosion, or chemical burn hazard if mishandled. Do not crush, puncture, incinerate, short-circuit, or expose to water.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Component	Weight %	CAS No.	EC No.
Lithium iron(II) phosphate	40	15365-14-7	—
Graphite	20	7782-42-5	231-955-3
Lithium hexafluorophosphate	13	21324-40-3	244-334-7
Copper	10	7440-50-8	231-159-6
Aluminium	6	7429-90-5	231-072-3
Dimethyl carbonate	5	616-38-6	210-478-4
Ethylene carbonate	5	96-49-1	202-510-0
Ethene, 1,1-difluoro-, homopolymer (PVDF)	1	24937-79-9	—

The battery is a sealed article integrated into the floor scrubber; the components above are not exposed during normal operation. Percentages are nominal by weight.

SECTION 4 FIRST-AID MEASURES

First-aid measures apply only if the battery is breached and internal materials/electrolyte are released.

General Advice	Immediate medical attention is required. Show this safety data sheet to the attending physician.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if discomfort persists.
Skin Contact	Remove contaminated clothing and shoes immediately. Wash with plenty of water for at least 15 minutes and consult a physician if discomfort persists.
Ingestion	Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.
Inhalation	Move victim into fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance. If not breathing, give artificial respiration and consult a physician.
Protection of First-Aiders	Ensure medical personnel are aware of the material(s) involved. Take precautions to protect themselves and prevent spread of contamination.

Most important symptoms/effects: Substance accumulation may occur with repeated or long-term occupational exposure to released materials. Treat symptomatically; symptoms may be delayed.

SECTION 5 FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use water spray to extinguish fire. Cool surrounding lithium batteries and the equipment continuously with water spray. Dry chemical or CO_2 may also be used on localized fires.
Unsuitable Extinguishing Media	Do not use a solid water stream, as it may scatter or spread the fire.

Specific Hazards Arising from the Substance

- Containers / cells may explode when heated.
- Fire-exposed cells may vent contents through pressure-relief valves.
- May expand or decompose explosively when heated or involved in a fire.

Advice for Firefighters

- As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.

- Fight fire from a safe distance, with adequate cover.
- Prevent fire-extinguishing water from contaminating surface water or the ground-water system.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

- Ensure adequate ventilation. Remove all sources of ignition.
- Evacuate personnel to safe areas. Keep people away from and upwind of the spill/leak.
- Use personal protective equipment. Avoid breathing vapours, mist, gas or dust.

Environmental Precautions

- Prevent further leakage or spillage if safe to do so.
- Discharge into the environment must be avoided.

Methods and Materials for Containment and Cleaning Up

- Absorb spilled material in dry sand or inert absorbent. For large spills, contain by bunding.
- Promptly dispose of adhered/collected material in accordance with applicable laws and regulations.
- Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

SECTION 7 HANDLING AND STORAGE

Precautions for Safe Handling

- Handle in a well-ventilated place.
- Wear suitable protective equipment.
- Avoid contact with skin and eyes (if the battery is breached).
- Keep away from heat / sparks / open flames / hot surfaces.
- Take precautionary measures against static discharge.

Conditions for Safe Storage

- Keep containers tightly closed.
- Keep in a dry, cool and well-ventilated place.
- Keep away from heat / sparks / open flames / hot surfaces.
- Store away from incompatible materials and foodstuff containers.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limit Values

Component	Country / Region	ppm (8h)	mg/m³ (8h)	ppm (STEL)	mg/m³ (STEL)
Graphite (7782-42-5)	USA — OSHA	—	15	—	—
	South Korea	—	2	—	—
	Ireland	—	10	—	—
	Germany (DFG)	—	4	—	—
	Denmark	—	2.5	—	5
	Australia	—	3 (4)	—	—
Copper (7440-50-8)	The Netherlands	—	0.1	—	—
	Poland	—	0.2	—	—
	Latvia	—	0.5	—	1
	Germany (DFG)	—	0.01	—	0.02
Aluminium (7429-90-5)	USA — OSHA	—	15	—	—
	South Korea	—	10	—	—
	Ireland	—	1	—	—
	Germany (DFG)	—	4	—	—
	Denmark	—	5	—	10
	Australia	—	10	—	—

Biological limit value — Lithium hexafluorophosphate: SCOEL(EU), fluorine/urine, 8 mg/L, end of shift. Monitoring methods: EN 14042; GBZ/T 160; GBZ/T 300.

Engineering Controls

- Ensure adequate ventilation, especially in confined areas.
- Ensure eyewash stations and safety showers are close to the workstation.
- Use explosion-proof electrical / ventilating / lighting equipment.
- Set up an emergency exit and a necessary risk-elimination area.

Personal Protection Equipment

Eye Protection	Tightly fitting safety goggles (EN 166 / NIOSH).
Hand Protection	Protective gloves such as butyl rubber, passing EN 374 / US F739 / AS·NZS 2161.1.
Respiratory Protection	If exposure limits are exceeded or symptoms occur, use a full-face respirator with multi-purpose combination cartridges or type AXBEK (EN 14387).
Skin and Body Protection	Wear fire/flame-resistant, retardant clothing and antistatic boots.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Floor scrubber with integrated Li-ion battery pack; 25.6 V / 50 Ah / 1280 Wh	Upper / Lower Explosive Limits: No information available
Odor: No information available	Vapor Pressure: Not applicable
Odor Threshold: No information available	Relative Vapour Density (Air = 1): Not applicable
pH: No information available	Relative Density (Water = 1): No information available
Melting / Freezing Point: No information available	Solubility: No information available
Initial Boiling Point / Range: No information available	n-Octanol/Water Partition Coeff.: No information available
Flash Point (Closed Cup): Not applicable	Auto-Ignition Temperature: No information available
Evaporation Rate: Not applicable	Decomposition Temperature: No information available
Flammability: No information available	Kinematic Viscosity: Not applicable

SECTION 10 STABILITY AND REACTIVITY

Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
Chemical Stability	Stable under proper operation and storage conditions.
Possibility of Hazardous Reactions	Mixtures with metallic acetylide, when heated, cause a fire or incandescence. Reacts severely with halogens, interhalogens, or other strong oxidants, or causes a fire. Ultrafine powder will self-ignite in air at room temperature.
Conditions to Avoid	Incompatible materials, heat, flame and spark.
Incompatible Materials	Metal acetylide, halogen, interhalogen, halogen oxides, nitric acid, nitrous oxide, nitrates, nitrites, halogen oxyacid salts, chromates, permanganates, inorganic peroxides, metal oxides, peroxyformic acid, strong oxidants, water, acids, and mercury.
Hazardous Decomposition Products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	CAS No.	LD_{50} (Oral)	LD_{50} (Dermal)	LC_{50} (Inhal., 4h)
Ethylene carbonate	96-49-1	10000 mg/kg (Rat)	> 3000 mg/kg (Rabbit)	No data
Lithium hexafluorophosphate	21324-40-3	50–300 mg/kg (Rat)	275 mg/kg (Rat)	No data
Dimethyl carbonate	616-38-6	13000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	No data

Skin corrosion/irritation, serious eye damage/irritation, skin sensitization, respiratory sensitization, germ cell mutagenicity, reproductive toxicity, STOT (single & repeated exposure), and aspiration hazard: No information available.

Carcinogenicity

Component	CAS No.	IARC	NTP
Lithium iron(II) phosphate	15365-14-7	Not Listed	Not Listed
Graphite	7782-42-5	Not Listed	Not Listed
Lithium hexafluorophosphate	21324-40-3	Not Listed	Not Listed
Copper	7440-50-8	Not Listed	Not Listed
Aluminium	7429-90-5	Not Listed	Not Listed
Dimethyl carbonate	616-38-6	Not Listed	Not Listed
Ethylene carbonate	96-49-1	Not Listed	Not Listed
Ethene, 1,1-difluoro-, homopolymer (PVDF)	24937-79-9	Not Listed	Not Listed

SECTION 12 ECOLOGICAL INFORMATION

Acute Aquatic Toxicity

Component	CAS No.	Fish	Crustaceans	Algae
Copper	7440-50-8	LC_{50}: 0.665 mg/L (96h, Fish)	EC_{50}: 0.02 mg/L (48h)	ErC_{50}: 7.9 mg/L (96h)
Aluminium	7429-90-5	LC_{50}: 1.55 mg/L (96h, Fish)	No data	No data

Chronic Aquatic Toxicity	No information available.
Persistence and Degradability	No information available.
Bioaccumulative Potential	No information available.
Mobility in Soil	No information available.
Results of PBT and vPvB Assessment	None of the listed components meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Treatment Methods	Before disposal, refer to relevant national and local laws and regulations. Recycle through an authorized battery/electronics recycler where available.
Contaminated Packaging	Containers may still present a chemical hazard when empty. Keep away from heat and ignition sources. Return to supplier for recycling if possible.
Disposal Recommendations	Do not incinerate or dispose of in municipal trash. Follow applicable e-waste and battery disposal regulations.

SECTION 14 TRANSPORT INFORMATION

UN Number	UN 3481
UN Proper Shipping Name	Lithium ion batteries contained in equipment (including lithium ion polymer batteries)
Transport Hazard Class	9 (Miscellaneous dangerous goods)
Subsidiary Hazard Class	None
Packing Group	Packagings shall conform to Packing Group II performance level.
Marine Pollutant	No
Transport Label	Class 9 — Lithium battery label / mark

Special Provisions	Lithium batteries must be tested in accordance with the UN Manual of Tests and Criteria, Part III, sub-section 38.3 (UN 38.3) prior to transport. Ship in accordance with IATA DGR, IMDG Code, and 49 CFR (US DOT) as applicable.

SECTION 15 REGULATORY INFORMATION

US — TSCA	All intentional components are listed on the U.S. TSCA Inventory, with the exception of Lithium iron(II) phosphate (alloy/composition; constituent metals are listed).
US — OSHA	Prepared in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200). As an article the equipment is generally exempt from SDS requirements; this SDS is provided as a courtesy and for transport/handling reference.
US — SARA 311/312 Hazard Categories	Fire hazard (if battery abused). No other categories apply to the intact article.
US — California Proposition 65	No components in this product are currently listed under Proposition 65 in concentrations or forms that would trigger a warning for normal use.

International Chemical Inventory Status

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECL	AIIC	ENCS
Lithium iron(II) phosphate	×	√	√	√	×	×	√	×	×
Graphite	√	√	√	√	√	√	√	√	×
Lithium hexafluorophosphate	√	√	×	√	×	√	√	√	×
Copper	√	√	√	√	√	√	√	√	×
Aluminium	√	√	√	√	√	√	√	√	×
Dimethyl carbonate	√	√	√	√	√	√	√	√	√
Ethylene carbonate	√	√	√	√	√	√	√	√	√
PVDF (Ethene, 1,1-difluoro-, homopolymer)	×	√	√	√	√	√	√	√	√

√ Substance included in inventory. × No data or not included.

SECTION 16 OTHER INFORMATION

Issue / Creation Date	June 12, 2026
Revision Date	June 12, 2026
Revision	1.0
SDS Number	ONYX-SDS-DX15-BATTERY
GHS Edition	GHS 11th Revised Edition
Prepared By	ONYX Systems, LLC
Basis	UN GHS (11th revised edition) and OSHA HazCom 2012 (29 CFR 1910.1200). Technical data derived from manufacturer documentation.

Disclaimer

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