MATRIX Super Encapsulant Plus

SAFETY DATA SHEET

SECTION 1 – CHEMICAL AND COMPANY IDENTIFICATION:

Product Name: Matrix Super Encapsulant Plus Date Printed: 8/2/2018
Product Use/Class: General Purpose Fiber/Fabric Cleaning Solution Product ID: P JD SES

Supplier: Shield Industries, Inc.
Address: 131 Smokehill Lane
Woodstock, GA 30188 - USA
Telephone: 770-517-6869

Manufacturer: Shield Industries, Inc.
Address: 131 Smokehill Lane
Woodstock, GA 30188 - USA
24 Hour Emergency Hotline: 800-535-5053

SECTION 2 – HAZARD IDENTIFICATION:

Physical hazards:	Not applicable	----------
Health hazards:	Not applicable	----------
	Skin irritation	Category 2
	Eye irritation	Category 2
	Skin Sensitization	Category 1
	Specific target organ toxicity, single exposure	Category 3

Environmental hazards: Toxic to aquatic life with long lasting effects. (H411)
OSHA defined hazards: Not classified.

Label elements:

Signal word: Warning

Hazard statement Harmful if swallowed. (H302)
Causes skin irritation. (H315)
May cause an allergic skin reaction. (H317)
Causes serious eye irritation. (H319)
May cause respiratory irritation. (H335)
May cause damage to organs through prolonged or repeated exposure. (H373)

Precautionary statements:

Prevention: Wear protective gloves/protective clothing/eye protection/face protection. (P280)
Contaminated work clothing should not be allowed out of the workplace. (P272)
Wash hands and exposed skin thoroughly after handing. (P264)
Avoid breathing vapours. (P261)
In case of inadequate ventilation wear respiratory protection. (P285)

Response: IF SWALLOWED: Get medical advice/attention. Do NOT induce vomiting. (P301 + P313 + P331)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305 + P351 + P338)

Storage: Keep out of reach of children. (P102)

Disposal: Dispose of contents/container to an approved waste disposal plant. (P501)

Hazard(s) not otherwise classified (HNOC): None.

Supplemental information: None.

SECTION 3 COMPOSITION/INFORMATION ON COMPONENTS

COMPONENTS	CAS NUMBER	%
Water	7732-18-5	55 - 65 %
Proprietary Polymer	Trade Secret*	5 - 10 %
Proprietary Surfactant	Trade Secret*	1 - 8 %
Ethylene Glycol n-Butyl ether	111-76-2	10 - 15 %
Perfluoroalkyl phosphonic/phosphinic acids	Trade Secret*	< 0.1 %
Tetrapotassium pyrophosphate	7320-34-5	< 10 %
Proprietary preservative	Trade Secret*	< 1 %
Fragrance Compound	N/A (Mixture)	< 1 %

* Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

Additional Information:

Substances in the product which may present a health or environmental hazard, or which have been assigned occupational exposure limits, are detailed below:

None

SECTION 4 FIRST AID MEASURES

Inhalation: Move person to fresh air and keep at rest in a position comfortable for

breathing. If breathing is labored, administer oxygen. If systems persist, contact a POISON CENTER or doctor/physician.

Skin contact: If on skin, wash thoroughly with soap and water. If on clothes, remove clothing. Get medical attention if irritation develops and persists.

Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Keep eyes wide open and continue rinsing. Get medical attention if irritation develops and persists.

Ingestion: Keep respiratory tract clear. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Aspiration hazard. If conscious, give 8 to 16 oz. of water or milk to dilute substance. Seek medical attention immediately by contacting a physician or local Poison Control Center.

Most important symptoms/effects, acute and delayed:

May be harmful if inhaled, swallowed, or absorbed through the skin. Causes serious eye irritation. May cause an allergic skin reaction. May cause respiratory irritation.

Indication of immediate medical attention and special treatment needed:

If inhaled: Product contains an organic solvent, the inhalation of the vapour or mist of, may cause irritation of the nose, mouth, throat and lungs. Breathing large amounts of organic solvent vapours or mists may affect the central nervous system, causing headache, dizziness, nausea, confusion, loss of coordination, impaired judgment, or similar effects.

If ingested: May affect the central nervous system, causing effects similar to inhalation exposure. Immediately seek medical attention. Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information:

More affected persons from dangerous area. Do not leave victim unattended. Ensure that medical personnel are aware of the material(s) involved. Show this safety data sheet to the doctor in attendance.

SECTION 5 FIRE FIGHTING MEASURES

Suitable extinguishing media:

Water spray, foam, dry chemical powder, or carbon dioxide.

Unsuitable extinguishing media:

Do not use water jet.

Specific hazards arising from the chemical:

Combustion or thermal decomposition will evolve toxic and/or irritant vapours. Forms fumes of oxides of carbon, nitrogen, sulfur, phosphorus and toxic products such as hydrogen fluoride and other fluorinated organic compounds. If this material is evaporated to dryness with heat, unstable peroxides may form.

Special protective equipment and precautions for firefighters:

Firefighters should use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and self-contained breathing apparatus (SCBA).

Fire-fighting equipment/instructions:

Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapour pressure build up.

Specific methods:

Evacuate and keep any non-responders away. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.

General fire hazards:

None known.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Avoid contact with skin and eyes. Eliminate any ignition sources. Wear appropriate protective equipment and clothing during clean-up. Do not breathe vapours. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them.

Environmental precautions:

Avoid release to the environment. Avoid discharge into drains, water courses or onto the ground. Prevent further leakage or spillage if safe to do so. Inform appropriate managerial or supervisory personnel and authorities of all environmental releases.

Methods and materials for containment and cleaning up:

Dike and contain spillages and then collect with sand, earth, diatomaceous earth, vermiculite, or any other suitable adsorbent material. Collect spillage. Transfer to a container for disposal or recovery. Following product recovery, flush the area with water. If possible prevent water running into sewers. For waste disposal, see section 13 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling:

Avoid contact with skin and eyes. Wear appropriate personal protective equipment. Smoking, eating and drinking should be prohibited in the application area. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices. Do not aerosolize.

Advice on protection against fire and explosion:

Do not handle near an open flame, heat, sparks, or other sources of ignition.

Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a dry and well-ventilated place. Keep cool (below 50°C/ 122°F). Protect from sunlight. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Avoid storing in the presence of oxidizing or reducing agents. Do not store near an open flame, heat, sparks, or other sources of ignition.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits:

U.S. ACGIH Threshold Limit Values

Components	CAS	Type	Value
Ethylene glycol n-butyl ether	111-76-2	TWA (8 hr.)	20 ppm
		Notation	Skin

U.S. OSHA Threshold Limit Values

Components	CAS	Type	Value
Ethylene glycol n-butyl ether	111-76-2	TWA (8 hr.)	50 ppm
		Notation	Skin

Recommended monitoring method:

NIOSH 1403 (Alcohols IV)

Appropriate engineering controls:

For spray applications, use a coarse spray device such as a trigger sprayer with particle size production greater than 15 microns. Use only a low pressure (less than 60 psi) sprayer. Do not aerosolize or atomize. Suitable ventilation must be used during handling.

Individual protection measures, such as personal protective equipment:

Eye/face protection:

Wear safety glasses with side shields (or goggles). A splash shield is recommended when splashing is possible.

Hand protection:

Wear appropriate chemical resistant gloves (Butyl rubber, Neoprene, or Natural rubber). Check with protective equipment manufacturer's data.

Skin protection/Other:

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection:

Not normally required. If permissible workplace exposure levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (consult your safety representative). Engineering controls or administrative controls should be implemented to reduce exposure when workplace exposure levels are exceeded.

Thermal hazards:

Not normally required.

Environmental exposure controls:

Do not allow to enter drains, sewers or waterways. Avoid release to the environment.

General hygiene considerations:

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	
Physical state:	Liquid
Form:	Liquid
Color:	**C**lear to slightly hazy. pale amber color
Odor:	Characteristic, Lemon/Citrus
Odor threshold:	Not available.
pH:	8.0 – 9.0
Melting point/freezing point:	Not available.
Initial boiling point and boiling range	> 212 °F (100 °C) estimated
Flash point:	> 200 °F (Tag Closed Cup)
Evaporation rate:	Approximately 1 (water = 1)
Flammability (solid, gas):	Not applicable.
Upper/lower flammability or explosive limits:	
Flammability limit – lower (%):	1.1% (v) (Ethylene Glycol n-Butyl ether)
Flammability limit – upper (%):	10.6% (v) (Ethylene Glycol n-Butyl ether)
Explosive limit - lower (%):	Not available.
Explosive limit - upper (%):	Not available.
Vapor pressure:	Not available.
Relative Vapor density:	Heavier than air.
Vapor pressure:	Approximately 80.0 Pascal @ 68 °F (20 °C)/ (Ethylene Glycol n-Butyl ether)
Relative density:	1.12 +/- 0.02
Solubility (water):	Soluble
Partition coefficient (n-octanol/water):	Not available.
Auto-ignition temperature:	471 °F (Ethylene Glycol n-Butyl ether)
Decomposition temperature:	Not available.
Viscosity (kinematic cSt @ 40 °C):	Not available.
Other information:	
VOC:	0.13 %
LVP:	0.0 %

SECTION 10 STABILITY AND REACTIVITY

Reactivity:

The product is stable and non-reactive under normal ambient conditions of use, storage and transport.

Chemical stability:

Material is stable under normal conditions.

Possibility of hazardous reactions:

None anticipated.

Conditions to avoid:

Avoid contact with heat, ignition sources, and incompatible materials.

Incompatible materials:

Strong oxidizing or reducing agents.

Hazardous decomposition products:

At temperatures over 200 C, or under fire conditions, thermal decomposition will evolve toxic and irritant vapours. Forms: oxides of carbon, nitrogen, sulfur, and phosphorus and toxic products such as hydrogen fluoride and other fluorinated organic compounds.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Inhalation: May cause mild irritation to respiratory tract.
Skin contact: May cause skin irritation and/or dermatitis.
Eye contact: Vapors may **c**ause irritation to the eyes.

Symptoms related to the physical, chemical and toxicological characteristics:

If inhaled: Product contains an organic solvent, the inhalation of the vapour or mist of, may cause irritation of the nose, mouth, throat and lungs. Breathing large amounts of organic solvent vapours or mists may affect the central nervous system, causing headache, dizziness, nausea, confusion, loss of coordination, impaired judgment, or similar effects.
If ingested: May affect the central nervous system, causing effects similar to inhalation exposure. Immediately seek medical attention. Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
May cause irritation of nose and throat. Eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and/or degreasing of skin.

Information on toxicological effects:

Acute toxicity:

Components	CAS#	Test	Species	Test Results
Ethylene glycol n-Butyl ether	111-76-2	Acute Oral LD50	Mouse	1.2 g/kg
		Acute Dermal LD50	Rabbit	>1,200 mg/kg
		Inhalation Risk LC50	Rat	>691 ppm (1 hr.)
Tetrapotassium pyrophosphate	7320-34-5	Acute Dermal LD50	Rabbit	>4,640 mg/kg
Proprietary Surfactant	--------	Acute Oral LD50	Rat	>2000 mg/kg
		Acute Dermal LD50	Rabbit	>2000 mg/kg
Perfluoroalkyl phosphonic/ Phosphinic acids	----	Acute Oral LD50	Rat	500 – 2,000 mg/kg
Proprietary Preservative	----------	Acute Oral LD50	Rat	670 mg/kg
		Acute Dermal LD50	Rabbit	>2000 mg/kg

Skin corrosion/irritation: **C**auses skin irritation and/or dermatitis. Causes serious eye irritation.

Serious eye damage/eye irritation: Vapours may cause eye irritation.

Respiratory or skin sensitization:

Respiratory sensitization: Vapours may cause irritation.

Skin sensitization: This product has not been tested, however none of the components are known or suspected to cause skin sensitization.

Germ cell mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity: None of the components of this material are listed as carcinogens by IARC, ACGIH, NTP, or OSHA. ACGIH has listed Ethylene glycol n-Butyl ether as an "A3 – Animal Carcinogen" based on studies on experimental animals. Their relevance to human metabolic mechanisms, expected occupational doses, or likely routes of exposure is not clear or confirmed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
Not listed.

Repeated dose toxicity:

Component:	Ethylene glycol N-butyl ether
Species:	Rat
Application Route:	Oral
NOEL:	250 mg/kg/day
Component:	Ethylene glycol N-butyl ether
Species:	Rat
Application Route:	Inhalation
NOEL:	14 ppm
Component:	Ethylene glycol N-butyl ether
Species:	Rat
Application Route:	Dermal
NOEL:	<200 mg/kg/day

Specific target organ toxicity - single exposure:
Subchronic: This mixture has not been tested. Ethylene glycol n-Butyl ether: Studies in rats and rabbits suggests hemolytic effects on red blood cells that eventually lead to further effects on the liver and kidneys. Their relevance to human metabolic mechanisms, expected occupational doses, or likely routes of exposure is not clear or confirmed.

Teratogenicity:
No data.

Aspiration hazard:
No specific data available, however product may present an aspiration hazard.

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity: Toxic to aquatic life with long lasting effects.

Acute Toxicity:

Components/CAS	Test	Species	Test Results
Proprietary Surfactant,	Aquatic Fish LC50	Rainbow trout	5 - 8.5 mg/l, 96 hr.

/Trade Secret	Aquatic Crustacea EC50	Water flea (Daphnia magna)	5.3 - 10 mg/l, 72 hr.
Perfluoroalkyl phosphonic/	Aquatic Fish LC50	Zebra fish	10 - 100 mg/l, 96 hr.
Phosphinic acids/	Aquatic Crustacea EC50	Water flea (Daphnia magna)	10 - 100 mg/l, 24 hr.
Trade Secret	EC50	Bacteria	<1,000 mg/l
Ethylene Glycol	Aquatic Fish LC50	Fish	1,464 mg/l, 96 hr.
n-Butyl ether/	Aquatic Invertebrate EC50		1,800 mg/l, 48 hr.
111-76-2	Aquatic Algae EC50		911 mg/l, 72 hr.

Long Term Toxicity:

No data available.

Persistence and degradability:

Proprietary Surfactant:	Readily biodegradable
Perfluoroalkyl phosphonic/phosphinic acids:	Not readily biodegradable. (<80%)

Bioaccumulative potential:

No data available.

Mobility in soil:

No data available.

Results of PBT and vPvB assessment:

No data available.

Other adverse effects:

None known.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment/disposal instructions:

Disposal should be in accordance with local, state, or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.

Waste from residues / unused products:

Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company. Dispose of in accordance with local regulations.

Contaminated packaging:

Exercise caution as empty containers or liners may retain some product residues. Do not re-use empty containers. Do not burn, or use a cutting torch on, empty containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14 TRANSPORT INFORMATION

DOT

UN number:	Not applicable
UN proper shipping name:	Cleaning compounds N.O.S.
Transport hazard class(es):	
Class:	Not applicable
Subsidiary risk:	-
Label(s):	Not applicable
Packing group:	Not applicable

Special precautions for user:
Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

Environmental hazards: No
Special provisions: None Assigned
Packaging exceptions:
None – Not classified as dangerous for transportation
Packaging bulk:
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:
Not applicable

IATA

UN number: Not applicable
UN proper shipping name: Cleaning compounds N.O.S.
Transport hazard class(es):
Class Not applicable
Subsidiary risk -
Label(s) Not applicable
Packing group Not applicable
Environmental hazards No
ERG Code Not applicable
Special precautions for user:
Read safety instructions, SDS and emergency procedures before handling. Read Safety instructions, SDS and emergency procedures before handling.

Packaging bulk:
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:
Not applicable

IMDG

UN number: Not applicable
UN proper shipping name: Cleaning compounds, n.o.s.
Transport hazard class(es):
Class: Not applicable
Subsidiary risk: -
Label(s): Not applicable
Packing group: Not applicable
Environmental hazards:
Marine pollutant: No
Special precautions for user:
Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

Packaging bulk:
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:
Not applicable

SECTION 15 REGULATORY INFORMATION

US federal regulations:

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List or polymer exempt.

TSCA Section 5 SNUR: (40 CFR 721.10536.

The Fluorinated anionic surfactants in this product are subject to an action under this section.

CERCLA Hazardous Substance List (40 CFR 302.4)

Components with known CAS numbers listed as hazardous substances and subject to reporting:

Ethylene Glycol n-Butyl ether (CAS# 111-76-2): RQ: None

SARA 311/312 – Superfund Amendments and Reauthorization Act of 1986:

Hazard categories:

Immediate Hazard	Yes
Delayed Hazard	Yes
Fire Hazard	No
Pressure:	No
Reactivity:	No

SARA 313 – Toxic Chemicals (40 CFR 372):

Components listed as reportable and known to be present at or above de minimus levels as specified in 40 CFR 372.38(a):

Ethylene Glycol n-Butyl ether (CAS# 111-76-2)

SARA 302 Threshold Planning Quantity:

Not regulated.

Other federal regulations:

Clean Air Act (CAA) Ozone-Depletion Potential:

This product neither contains, nor was manufactured with a Class I, or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App. A+B).

US state regulations:

U.S. California Proposition 65:

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive effects.

Massachusetts Right to Know:

Ethylene Glycol n-Butyl ether (CAS# 111-76-2)

New Jersey Right to Know:

Ethylene Glycol n-Butyl ether (CAS# 111-76-2)

Pennsylvania Right to Know:

Ethylene Glycol n-Butyl ether (CAS# 111-76-2)

SECTION 16 OTHER INFORMATION

NFPA RATING: HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 0

PREPARATION INFORMATION:
DATE CREATED: 10/20/2015 LAST REVISION: 4/13/2016
CREATED/REVISED BY: R. Lasnik

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End of SDS