



10781 Plaza Dr.
Whitmore Lake, MI 48189
Ph: (734) 449-9500
Fax: (734) 449-9510
www.torchsurfacetech.com

ISO 9001:2008

PHOS & CLEAN HS-222

STEAM & CLEAN PHOSPHATE TREATMENT

HS-222 is a HIGH SOLIDS metal cleaner and iron phosphate treatment for use in steam cleaners, pressure wash-wand units, and soak tanks. EXCELLENT GREASE, OIL AND SOIL REMOVAL.

HS-222 provides paint and coating preparation which bonds and enhances corrosion resistance of large hard to finish products. FOR USE ON ALL METALS OF STEEL, ZINC, GALVANIZE AND ALUMINUM

HS-222 meets all specifications requiring a cleaner/iron phosphate treatment. Coating weights of 40-75 mg/ft. (9/04) HS-222 MEETS REQUIREMENTS OF SPEC AMS-2480-F., MIL Spec TTC-490 TYPE II

Features & Benefits

Rapid cleaning and providing an amorphous iron phosphate coating.
Easily removes difficult oils, greases, smut, light rust and films.
MILDER TO EMPLOYEES AND NO STRONG ODORS.
Liquid which is easily mixed into feeders and mixing valves.
Provides superior corrosion resistance and bonding of paints.
Attacks difficult smut and surface residues.

Can be used on steel, aluminum and zinc galvanize.
Meets requirements of government and automotive specifications.

Typical Processing

- 1) Air "blow-off" unit to be cleaned and phosphate coated. (Surface Dust)
- 2) Apply HS-222 at: Steam Wand: 1/2-3% for 30-120 sec., 150-212 deg.F
Soak(Steel) 3-5% for 2-5 minutes, pH 4.5-5.5 @ 115-150 deg.F
Soak(Aluminum) 3-5% for 2-5 minutes, pH 4.0-4.5 @ 115-150 deg.F
- 3) Apply evenly to the surface. If items are large start at the bottom.
- 4) (OPTIONAL) Rinse with warm water and dry completely to prevent rusting or oxidation. Note a sealer rinse can be used such as NCS-100.
- 5) Dry

Waste Disposal:

NEUTRALIZE PH, REMOVE FATS, OILS, GREASE AND HEAVY METALS.

Holding Tank Materials Of Construction:

ACID RESISTANT, STAINLESS OR POLY

Specifications

DATE:	1/8/2005
PH:	~2.5
PROD. TYPE	LIQUID
SPEC.GRAV:	1.15
LBS./GAL.:	9.59
FOAM, 0=Low 9=High	9
Shelf Life Years:	10 YEARS
Freeze Information:	Not Damaged by Freezing

Packaging

Container Type:	POLY
Net Units:	528
Tare Wt.	25 LB.
Gross Wt.	553
DOT_Name:	Not regulated by DOT
DOT Hazard:	Not Regulated
Tariff ID:	2835.22.00

Use Parameters

Concentration Range:	.5-5% by volume
Temperature Range:	120-212 F.
Time Range:	30-120 seconds ~
Agitation:	As necessary

Other Information

It is important that the OSHA DATA, "Material Safety Data Sheet" be carefully read and reviewed with the users of this product. OSHA data is required to be posted in the work area by law.

"Advanced Surface Technologies for Industry" ISO 9001:2008 Certified

Since this information is provided without charge, Torch assumes no liability for the improper use of this product. No warranty is expressed or implied unless written. It is the buyers responsibility to determine suitability of use and also that the workplace and disposal practices are in compliance with all federal, state and local laws and ordinances.

Section 1: Product and Company Information

Product Name: **PHOS & CLEAN HS-222**

OSHA Date

STEAM & CLEAN PHOSPHATE TREATMENT

5/29/2015

Manufacturer: Torch Surface Technologies, 10781 Plaza Dr., Whitmore Lake MI 48189
 PH:(734)449-9500 Fax (734) 449-9510 email:info@torchsurfacetech.com
 PERS Emergency: 800-633-8253

Section 2: Hazards Identification

Signal Word: **Warning**



Hazard Class:

Skin Corrosion/Irritation 2	Causes skin irritation
Eye Damage/Irritation 2B	Causes eye irritation

HMIS RATING SCALE

0 = MINIMAL	HEALTH	<input type="text" value="1"/>
1 = SLIGHT	FLAMMABILITY:	<input type="text" value="0"/>
2 = MODERATE	REACTIVITY:	<input type="text" value="1"/>
3 = SERIOUS	PERSONAL PROTECTION:	<input type="text" value="B"/>
4 = SEVERE		

Precautionary Statements

Prevention

Wash hands thoroughly after handling.
 Wear protective gloves.
 Wear eye protection and face protection.

Response

If on skin: Wash with plenty of soap and water.
If skin irritation occurs: Get medical attention.
Take off contaminated clothing and wash before reuse.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical attention

Storage: Store Locked Up.

Disposal: Dispose of contents and container in accordance with local regulations.

Section 3: Composition / Information on Ingredients

CAS#	Ingredients	%BWT
1341-49-7	Inorganic Fluoride	<1
144-55-8	Inorganic Sodium Buffer	< 20
7558-80-7	Sodium Phosphate, Mono	<15
127036-24-2	Alcohol Ethoxylate	< 10

The balance of the ingredients are not classified as hazardous or are below the concentration limit to be classified as hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Section 4: First Aid Measures

Eyes: Flush with large amount of water 15 minutes. Obtain medical aid if irritant persists.
Inhalation: Remove victim to fresh air.
Skin: Flush area with large amounts of water.
Ingestion: DO NOT INDUCE VOMIT. Drink large amounts of water. Obtain prompt medical aid.

INDUCE VOMIT: DO NOT INDUCE VOMIT:

Section 5: Firefighting Measures

Flash Point:
Material Is:
Flammable Limits: LEL UEL
Method Used:
Extinguish Media:

Special Fire Fighting Proc.

Fire fighters should use self-contained breathing apparatus and full protective clothing. Use water spray to cool fire exposed containers.

Section 6: Accidental Release Measures

Spills: Should be contained and absorbed with inert material, collected & disposed of in a proper manner. Prevent spills from entering waterways, sewers and confined spaces. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8.

Disposal: Dispose of contents and container in accordance with local regulations.

Section 7: Handling and Storage

Storage: Store Locked Up.

Incompatibilities acids alkali oxidizers reducers

Other:

Holding Tank Materials Of Construction:

ACID RESISTANT, STAINLESS OR POLY

Freezing Information: Not Damaged by Freezing

Shelf Life: 10 Years

Section 8: Exposure Controls/Personal Protection

CAS#	Ingredients	TLV(mg/m3)	PEL(mg/m3)
1341-49-7	Inorganic Fluoride	2.5	2.5
144-55-8	Inorganic Sodium Buffer	ND	ND
7558-80-7	Sodium Phosphate, Mono	ND	ND
127036-24-2	Alcohol Ethoxylate	ND	ND

Personal Protection: Employers must perform a Hazard Assessment of all workplaces to determine the proper protective equipment required for all tasks.

Ventilation: Use in well ventilated areas

Protective Clothing: Provide rubber gloves, chemical goggles or protective eyewear, boots, aprons & hard hat if in contact.

Respiratory: Use protection if misting of product is possible.

Eye Protection: Always use safety goggles and full face shield

Section 9: Physical and Chemical Properties

Physical State: <input type="text" value="LIQUID"/>	Flash Point: <input type="text" value="NA"/>	Auto Ignition Temp: <input type="text" value="NA"/>
Boiling Point (F): <input type="text" value=">212"/>	Solids % by wt. <input type="text" value="<40"/>	Decomposition Temp: <input type="text" value="NA"/>
Specific Gravity: (H2O=1): <input type="text" value="1.15"/>	Vapor Density: <input type="text" value="NA"/>	Viscosity: <input type="text" value="NA"/>
Melting-Freeze Point: <input type="text" value="NA"/>	Odor: <input type="text" value="Mild Acid"/>	Partition Coefficient: <input type="text" value="NA"/>
Vapor Pressure (mmHg): <input type="text" value="na"/>	pH 100%: <input type="text" value="~2.5"/>	Octanol/Water
Solubility in Water % b/w: <input type="text" value="100"/>	Color: <input type="text" value="ORANGE"/>	Flammable Limits: <input type="text" value="non-flammable."/>
Evaporation Rate (BuAl=1): <input type="text" value="NA"/>	VOC Content %: <input type="text" value="0"/>	LEL <input type="text" value="NA"/> UEL <input type="text" value="NA"/>

Section 10: Stability and Reactivity

Incompatibilities acids alkali oxidizers reducers

Other:

Hazardous Decomposition Products: Carbon Monoxide

Hazardous Polymerization: Will Not Occur

Stability: Stable

Section 11: Toxicological Information

Ingestion: Will cause irritation to mouth, esophagus, and stomach.

Eye Contact: Can cause irritation.

Skin Contact: Can cause dry skin.

Inhalation: Can cause irritation to the respiratory tract.

CAS#	Ingredients	Carcinogen	IDLH (ppm)
1341-49-7	Inorganic Fluoride	No	30 AS
144-55-8	Inorganic Sodium Buffer	No	NA
7558-80-7	Sodium Phosphate, Mono	No	ND
127036-24-2	Alcohol Ethoxylate	No	ND

Section 12: Ecological Information

Environmental Toxicity: This product has not been evaluated for ecotoxicity. As with any chemical, environmental exposure should be prevented and minimized as much as possible.

Section 13: Disposal Considerations

Disposal should be in accordance with applicable regional, national and local laws and regulations. Wastes should be tested and classified in accordance with 40 CFR Part 261. It is the generators responsibility to determine if waste meets the applicable guidelines of hazardous waste. Consult with an environmental professional for assistance. Use only approved transporters, treatment, storage or disposal facilities.

Section 14: Transport Information

Shipping Name: Not regulated by DOT

Hazard Class:

Not Regulated

Section 15: Regulatory Information

CAS#	Ingredients	Sara 302 EHS TPQ	Sara 304 EHS-RQ	CERCLA RQ lbs.	Sara 313		Canada DSL
					Cercla Toxic	TSCA List	
1341-49-7	Inorganic Fluoride	NA	NA	100	NO	YES	YES
144-55-8	Inorganic Sodium Buffer	NA	NA	NA	NO	YES	YES
7558-80-7	Sodium Phosphate, Mono	NA	NA	NA	NO	YES	YES
127036-24-2	Alcohol Ethoxylate	NA	NA	NA	NO	YES	YES

SARA 311/312 Hazard Categories

- Acute Health Hazard Yes No
- Chronic Health Hazard Yes No
- Reactive Hazard Yes No
- Fire Hazard Yes No
- Sudden Release of Pressure Hazard Yes No

Section 16: Other Information

OSHA Date 5/29/15

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Torch Surface Tech be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Torch Surface Tech has been advised of the possibility of such damages.