



Passivate Plus

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 01/15/2015

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : Passivate Plus
Product code : 6320

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

Use of the substance/mixture : Low Foaming Acid Cleaner; Passivating Acid

1.3. Details of the supplier of the safety data sheet

Ace Chemical Products, Inc.
8415 N. 87th Street
Milwaukee, WI 53224 - USA
T (414) 357-8515 - F (414) 357-8528
info@acechem.com - www.acechem.com

1.4. Emergency telephone number

Emergency number : For help in chemical emergencies, call Chemtrec day or night
Chemtrec 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Corr. 1A H314

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS05

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H314 - Causes severe skin burns and eye damage
H290 - May be corrosive to metals

Precautionary statements (GHS-US) : P260 - Do not breathe dust, mist, spray
P264 - Wash all exposed body parts thoroughly after handling
P280 - Wear eye protection, face protection, protective clothing, protective gloves
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a doctor, POISON CENTER
P321 - Specific treatment - see First Aid measures on this label
P363 - Wash contaminated clothing before reuse
P405 - Store locked up
P406 - Store in corrosion-resistant container with a resistant inner liner
P501 - Dispose of contents/container to proper treatment facilities in accordance with all applicable local, state & federal regulations
Do not mix with bleach or other chlorinated products - may generate dangerous chlorine gas

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

Passivate Plus

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
phosphoric acid, conc=75%, aqueous solution	(CAS No) 7664-38-2	25 - 35	Skin Corr. 1B, H314
Nitric Acid, 58%	(CAS No) 7697-37-2	10 - 20	Skin Corr. 1A, H314

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). IF exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
- First-aid measures after skin contact : Wash immediately with lots of water (15 minutes)/shower. Do not apply (chemical) neutralizing agents. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.
- First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Cover eyes aseptically. Take victim to an ophthalmologist. Do not apply neutralizing agents. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Do not give activated charcoal. Do not give chemical antidote. Immediately call a POISON CENTER or doctor/physician. Take the container/vomit to the doctor/hospital. Ingestion of large quantities: immediately to hospital.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Causes severe skin burns and eye damage.
- Symptoms/injuries after inhalation : Irritation of the respiratory tract. Dry/sore throat. Coughing. FOLLOWING SYMPTOMS MAY APPEAR LATER: Corrosion of the upper respiratory tract. Respiratory difficulties. Possible inflammation of the respiratory tract. Risk of lung oedema. Blue/grey discolouration of the skin.
- Symptoms/injuries after skin contact : Yellow skin. May stain the skin. Caustic burns/corrosion of the skin. Slow-healing wounds.
- Symptoms/injuries after eye contact : Corrosion of the eye tissue.
- Symptoms/injuries after ingestion : Burns to the gastric/intestinal mucosa. Nausea. Abdominal pain. Blood in vomit. AFTER ABSORPTION OF HIGH QUANTITIES: Shock.
- Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Affection/discolouration of the teeth. Risk of pneumonia.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : EXTINGUISHING MEDIA FOR SURROUNDING FIRES: Adapt extinguishing media to the environment.
- Unsuitable extinguishing media : No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : DIRECT FIRE HAZARD. Non combustible. INDIRECT FIRE HAZARD. Reactions involving a fire hazard: see "Reactivity Hazard".
- Explosion hazard : INDIRECT EXPLOSION HAZARD. Reactions with explosion hazards: see "Reactivity Hazard".
- Reactivity : Reacts on exposure to temperature rise with (some) metals: release of highly flammable gases/vapours (hydrogen). On burning: release of toxic and corrosive gases/vapours (phosphorus oxides). Violent to explosive reaction with many compounds e.g.: with (strong) oxidizers. And with (some) bases.

Passivate Plus

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

5.3. Advice for firefighters

- Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Dilute toxic gases with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment : Gas-tight suit. Corrosion-proof suit. See "Material-Handling" to select protective clothing.
- Emergency procedures : Mark the danger area. No naked flames. Wash contaminated clothes. Large spills/in confined spaces: consider evacuation. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

- For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the liquid spill. Hazardous reaction: measure explosive gas-air mixture. Reaction: dilute combustible gas/vapour with water curtain. Take account of toxic/corrosive precipitation water. Heat exposure: dilute toxic gas/vapour with water spray.
- Methods for cleaning up : Take up liquid spill into inert absorbent material, e.g.: sand/earth. Scoop absorbed substance into closing containers. See "Material-handling" for suitable container materials. Neutralize leftovers with slaked lime or soda ash. Carefully collect the spill/leftovers. Damaged/cooled tanks must be emptied. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep away from naked flames/heat. Observe strict hygiene. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.
- Hygiene measures : Wash all exposed body parts thoroughly after handling all exposed body parts. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Comply with applicable regulations.
- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : direct sunlight, heat sources. Keep container closed when not in use.
- Incompatible products : Strong bases. Do not mix with bleach or other chlorinated products - may generate dangerous chlorine gas.
- Incompatible materials : Sources of ignition. Direct sunlight.
- Maximum storage period : 1 year
- Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources.
- Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: (strong) bases. oxidizing agents.
- Storage area : Store in a cool area. Keep out of direct sunlight. Store in a dry area. Store in a dark area. Keep locked up. Provide for a tub to collect spills. Keep only in the original container. Meets the legal requirements.

Passivate Plus

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

- Special rules on packaging : SPECIAL REQUIREMENTS: closing. clean. correctly labelled. meet the legal requirements.
Secure fragile packagings in solid containers.
- Packaging materials : SUITABLE MATERIAL: stainless steel. synthetic material. steel with rubber inner lining.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Passivate 19		
ACGIH	Not applicable	
OSHA	Not applicable	
phosphoric acid, conc=75%, aqueous solution (7664-38-2)		
ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³
ACGIH	ACGIH STEL (mg/m ³)	3 mg/m ³
OSHA	Not applicable	
Nitric Acid, 58% (7697-37-2)		
ACGIH	ACGIH TWA (ppm)	2 ppm
ACGIH	ACGIH STEL (ppm)	2 ppm
OSHA	Not applicable	

8.2. Exposure controls

- Personal protective equipment : Avoid all unnecessary exposure.
- Materials for protective clothing : GIVE GOOD RESISTANCE: butyl rubber. natural rubber. neoprene. nitrile rubber. polyethylene. PVC. viton. GIVE POOR RESISTANCE: PVA.
- Hand protection : Gloves.
- Eye protection : Face shield.
- Skin and body protection : Corrosion-proof clothing.
- Respiratory protection : Wear gas mask with filter type B if conc. in air > exposure limit.
- Thermal hazard protection : None necessary.
- Consumer exposure controls : Do not eat, drink or smoke during use.
- Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Appearance : Clear.
- Colour : Red
- Odour : acidic
- Odour threshold : No data available
- pH : 0 - 2
- pH solution : 2 - 4
- Relative evaporation rate (butylacetate=1) : No data available
- Melting point : No data available
- Freezing point : 0 °C
- Boiling point : 100 °C
- Flash point : No data available
- Auto-ignition temperature : No data available
- Decomposition temperature : No data available
- Flammability (solid, gas) : No data available
- Vapour pressure : No data available
- Relative vapour density at 20 °C : No data available

Passivate Plus

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Relative density	: No data available
Density	: 1.2 g/ml
Solubility	: Soluble in water. Water: 100 %
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: None.
Oxidising properties	: Oxidiser.
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts on exposure to temperature rise with (some) metals: release of highly flammable gases/vapours (hydrogen). On burning: release of toxic and corrosive gases/vapours (phosphorus oxides). Violent to explosive reaction with many compounds e.g.: with (strong) oxidizers. And with (some) bases.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No reactivity hazard other than the effects described in sub-sections below.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases. Do not mix with bleach or other chlorinated products - may generate dangerous chlorine gas. May react violently with alkalis. May be corrosive to metals. May react with bases, copper, silver, mercury, magnesium, zinc and their alloys.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. Thermal decomposition generates : Corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

phosphoric acid, conc=75%, aqueous solution (7664-38-2)	
LD50 oral rat	4400 mg/kg (Rat)
ATE US (oral)	4400.000 mg/kg bodyweight

Skin corrosion/irritation : Causes severe skin burns and eye damage.

pH: 0 - 2

Serious eye damage/irritation : Not classified

pH: 0 - 2

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Passivate Plus

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Symptoms/injuries after inhalation	: Irritation of the respiratory tract. Dry/sore throat. Coughing. FOLLOWING SYMPTOMS MAY APPEAR LATER: Corrosion of the upper respiratory tract. Respiratory difficulties. Possible inflammation of the respiratory tract. Risk of lung oedema. Blue/grey discolouration of the skin.
Symptoms/injuries after skin contact	: Yellow skin. May stain the skin. Caustic burns/corrosion of the skin. Slow-healing wounds.
Symptoms/injuries after eye contact	: Corrosion of the eye tissue.
Symptoms/injuries after ingestion	: Burns to the gastric/intestinal mucosa. Nausea. Abdominal pain. Blood in vomit. AFTER ABSORPTION OF HIGH QUANTITIES: Shock.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Affection/discolouration of the teeth. Risk of pneumonia.

SECTION 12: Ecological information

12.1. Toxicity

phosphoric acid, conc=75%, aqueous solution (7664-38-2)	
LC50 fishes 1	138 mg/l (96 h; Pisces; Pure substance)
LC50 other aquatic organisms 1	240 mg/l (96 h; Protozoa; Pure substance)
LC50 fish 2	100 - 1000 mg/l (Pisces; Pure substance)
LC50 other aquatic organisms 2	100 - 1000 mg/l (Pure substance)
TLM fish 1	138 ppm (24 h; Gambusia affinis; Pure substance)
Threshold limit other aquatic organisms 1	240 mg/l (96 h; Protozoa; Pure substance)
Threshold limit other aquatic organisms 2	100 - 1000, Pure substance
Nitric Acid, 58% (7697-37-2)	
LC50 fishes 1	25 - 36 mg/l (96 h; Lepomis macrochirus; Pure substance)
EC50 Daphnia 1	180 mg/l (48 h; Daphnia magna; Pure substance)
LC50 fish 2	72 ppm (Gambusia affinis; Pure substance)
Threshold limit algae 1	> 19 mg/l (Algae; Pure substance)

12.2. Persistence and degradability

Passivate 19	
Persistence and degradability	Not established.
phosphoric acid, conc=75%, aqueous solution (7664-38-2)	
Persistence and degradability	Biodegradability: not applicable. No (test) data on mobility of the components available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
Nitric Acid, 58% (7697-37-2)	
Persistence and degradability	Biodegradability: not applicable. Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

Passivate 19	
Bioaccumulative potential	Not established.
phosphoric acid, conc=75%, aqueous solution (7664-38-2)	
Log Pow	-0.77 (Estimated value)
Bioaccumulative potential	Bioaccumulation: not applicable.
Nitric Acid, 58% (7697-37-2)	
BCF fish 1	<= 1 (Pisces)
Log Pow	-2.3 (OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method)
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.

12.4. Mobility in soil

No additional information available

Passivate Plus

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

12.5. Other adverse effects

- Effect on ozone layer :
Effect on the global warming : No known ecological damage caused by this product.
Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

- Waste disposal recommendations : Remove waste in accordance with local, state and/or national regulations. Remove for physico-chemical/biological treatment. Do not discharge into surface water. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to proper treatment facilities in accordance with all applicable local, state & federal regulations.
Additional information : Clean up even minor leaks or spills if possible without unnecessary risk.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

- In accordance with DOT
Transport document description : UN1760 Corrosive liquids, n.o.s. (Phosphoric Acid, Nitric Acid), 8, II
UN-No.(DOT) : UN1760
Proper Shipping Name (DOT) : Corrosive liquids, n.o.s.
(Phosphoric Acid, Nitric Acid)
Department of Transportation (DOT) Hazard Classes : 8 - Class 8 - Corrosive material 49 CFR 173.136
Hazard labels (DOT) : 8 - Corrosive



- DOT Symbols : G - Identifies PSN requiring a technical name
Packing group (DOT) : II - Medium Danger
DOT Special Provisions (49 CFR 172.102) : B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized.
IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.
T11 - 6 178.274(d)(2) Normal..... 178.275(d)(3)
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.
TP27 - A portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx) : 154
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 30 L
DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

Passivate Plus

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

Additional information

Emergency Response Guide (ERG) Number : 154

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

C; R34

Full text of R-phrases: see section 16

15.2.2. National regulations

15.3. US State regulations

SECTION 16: Other information

Other information : None.

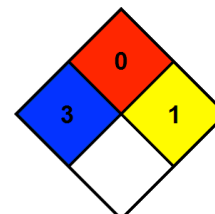
Full text of H-phrases:

Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
H314	Causes severe skin burns and eye damage

NFPA health hazard : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.



HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 0 Minimal Hazard

Physical : 1 Slight Hazard

Personal Protection : D

Passivate Plus

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product