



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

PCID NO. 1070

Sodium Hydroxide (Caustic Soda)

Eff: 10/16/2017

(This item description supersedes PCID 1070 dated 03/15/10)

This Pennsylvania Commercial Item Description covers requirements for sodium hydroxide, flaked or granular used as water treatment chemical for condensate line build-up in both boiler water and domestic water systems and sodium hydroxide, liquid for use in soap manufacturing. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation for Bids.

1. Classification – Types covered under this specification1.1 **Type 1**– Flaked, Granular or Pearl (Spherical)1.2 **Type 2**– Liquid 25 % (must meet AWWA Standard B501-03)1.3 **Type 3**- Liquid 50% (must meet AWWA Standard B501-03)**2. Requirements** - The material must meet the following requirements (Percentages are by weight):

	<u>Type 1</u>	<u>Type 2</u>	<u>Type 3</u>	<u>Test Method</u>
Sodium Hydroxide, % min.	96.0	25.0	50.0	ASTM D-501
Carbonate as Sodium Carbonate, % max.	2.0	1.0	1.0	ASTM D-501
Total Alkalinity as Sodium Oxide, % min.	75.0	38.0	38.0	ASTM D-501
Specific Gravity, min.	-----	1.52* ² (47.7 Baumé)	1.52* ² (47.7 Baumé)	ASTM D-1298
Density pounds/gallon, min.	-----	12.7	12.7	ASTM D-1475

Type 1 - Sample shall be taken in accordance with ASTM D-501.

Type 2 - Shall be at temperature of 20° C /20° C

Type 3 - Shall be at temperature of 20° C /20° C

3. Inspection & Rejection - Sampling for prior to/post award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge

the supplier for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the supplier fails to apply timely and corrective measures.

4. Packaging –Product shall be packaged according to good commercial practice.

4.1 Type 1, sodium hydroxide shall be shipped in 50 pound multi-walled bags or 55 gal. plastic drums.

4.2 Type 2, sodium hydroxide will be purchased in tank truck quantities, as requested by agency. Since liquid sodium hydroxide flows freely during cold weather, it shall be delivered at a temperature, which will prevent crystallization. Tank trucks will be equipped with pump and armored rubber or flexible steel hose for delivery of the caustic into bulk storage tanks. Pumps shall be capable of pumping liquid caustic soda to a vertical eight not to exceed 20 feet.

4.3 Type 3, sodium hydroxide shall be shipped in 55 gal. plastic drums.

4.4 Type 3 (50%), sodium hydroxide will be purchased in tank truck quantities, as requested by agency. Since liquid sodium hydroxide flows freely during cold weather, it shall be delivered at a temperature, which will prevent crystallization. Tank trucks will be equipped with pump and armored rubber or flexible steel hose for delivery of the caustic into bulk storage tanks. Pumps shall be capable of pumping liquid caustic soda to a vertical eight not to exceed 20 feet.

4.5 Type 3, shall also be available in 300 gallon totes.

5. Material Master – SAP Material Master Number:

301720 - Type 2, Chemical, Mine Treat, Caustic Soda Liq 25%

6. Documents:

(ASTM Testing Methods)

American Society Testing & Materials

100 Barr Harbor Drive

West Conshohocken, PA. 19428

Quality Assurance Specialist: Bill Hugendubler, CPPB Division Chief: Janice Pistor

Quality Assurance Supervisor: Brian Vulgaris



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

PCID NO. 1071
 Eff. 2/14/08

Sodium Carbonate (Soda Ash)

(this item description supersedes PCID 1071 dated 6/28/06)

This Pennsylvania Commercial Item Description covers requirements for sodium carbonate used as water treatment chemical for condensate line build-up in both boiler water and domestic water systems and in soap manufacturing. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for-Bids.

1. Classification – Types covered under this specification

1.1 There are three types of sodium carbonate applicable under this PCID; all are anhydrous, powdered, technical grade. See requirements for details.

2. Requirements*¹ - The material must meet the following requirements (Percentages are by weight):

	<u>Type 1</u>	<u>Type 2</u>	<u>Type 3</u>	<u>Test Method</u>
Total Assay as Sodium Carbonate, % min.	99.0	99.0	96.16	ASTM 501
Total Alkalinity as Sodium Oxide, % min.	58.0	58.0	58.0	ASTM 501
Volatile Matter, % max.	4.00	4.00	1.00	ASTM 501
Insoluble Matter, % max.	0.24	0.24	0.25	ASTM 501
Apparent Density in lbs. Per ft ³ , min.	29.0	57.0	35.0	ASTM 501
Apparent Density in lbs. Per ft ³ , max.	54.0	70.0	46.0	ASTM 501

*1 – Sample shall be taken in accordance with ASTM D-501.

3. Inspection & Rejection - Sampling for prior to/post- award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

4. Packaging –Product shall be packaged according to good commercial practice. All types of sodium carbonate shall be shipped in 50 pound or 100 pound multi-walled bags.

5. Material Master – SAP Material Master number:

301721 - Chemical, Mine Treat, Sodium Carb Ash

Documents-

(ASTM Testing Methods)
American Society Testing & Materials
100 Barr Harbor Drive
West Conshohocken, PA. 19428

Quality Assurance Specialist: Gerald Grecek, CPPB

Quality Assurance Supervisor: Craig Wolford, CPPB

Division Director: Paul Wolf, C.P.M., CPPB



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

PCID NO. 1073
Eff. 10/1/17

Sodium Sulfit
(This item description supersedes PCID 1073 dated 1/1/08)

This Pennsylvania Commercial Item Description covers requirements for sodium sulfit used as water treatment chemical for condensate line build-up in both boiler water and domestic water systems. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for-Bids.

1. Requirements The sodium sulfit shall be a white anhydrous powder. The material must meet the following requirements (Percentages are by weight):

Table with 2 columns: Requirement and Value. Rows include Assay Sodium Sulfit, Insoluble Matter, Sodium Chloride, Iron Content, SO2, Heavy Metals ppm max, and Iron ppm max.

Using test methods and procedures outlined and described in the American Chemical Society Specification for Reagent Chemicals, latest edition.

2. Inspection & Rejection - Sampling for prior to/post- award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements.

3. Packaging -Product shall be packaged according to good commercial practice.

4. Material Master - No Material Master established for this commodity.

5. Documents-

American Chemical Society (ACS Methods)
1155 Sixteenth Street, NW
Washington DC, 20036

Quality Assurance Specialist: Bill Hugendubler, CPPB

Quality Assurance Supervisor: Brian Vulgaris

Division Chief: Janice Pistor



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

PCID NO. 1074
Eff. 7/21/10

Lime
 (This item description supersedes PCID 1074 dated 3/31/10)

This Pennsylvania Commercial Item Description covers requirements for lime used for water and wastewater treatment when pH adjustment is necessary. Product shall conform to the following requirements unless otherwise specified in the Invitation-for Bid proposal or Purchase Order.

1.0 Classification – The lime shall be of the following types:

- Type 1 – Pebble Quicklime (80lb. bags or bulk delivery) High Calcium (HC)
- Type 2 – Hydrated Lime, powdered (50lb. bags or bulk delivery) High Calcium
- Type 3 – Hydrated Lime Slurry (bulk delivery) High Calcium

2.0 Requirements

2.1 The lime shall be in accordance with the chemical and physical requirements as specified below.

2.2 The lime shall contain no other minerals, inorganic or organic substances in quantities capable of producing deleterious or injurious effects upon the health of those consuming water that has been treated by it.

<u>Chemical Requirements</u>	<u>Type 1</u>	<u>Type 2</u>	<u>Type 3</u>	<u>Test Method</u>
Calcium Hydroxide % min.	----	----	95.0	ASTM C-25
SiO ₂ , Insolubles , % max.	2.5	1.6	1.0	ASTM C-25
Fe ₂ O ₃ , % max.	0.4	0.3	0.4	ASTM C-25
Al ₂ O ₃ , % max.	1.5	0.9	0.4	ASTM C-25
CaO, (Total) % min.	91.0	70.0	71.0	ASTM C-25
MgO, (Total) % max.	5.0	4.0	1.1	ASTM C-25
Loss on Ignition, %	3.0 max.	23.0 min.	23.0 min.	ASTM C-25
SO ₃ , % max.	0.2	0.08	0.1	ASTM C-25
CaO (Available) % min.	90.0	68.0	70.06	ASTM C-25
P, ppm max.	27.0	27.0	27.0	ASTM C-25

<u>Physical Testing</u>	<u>Type 1</u>	<u>Type 2</u>	<u>Type 3</u>	<u>Test Method</u>
Temperature Rise in 3 Min.	40.0°C min.	----	----	ASTM C-110
Amount Passing 1" Mesh	----	100.0% min.	----	ASTM C-110
Amount Passing ½" Mesh	90% min.	----	----	ASTM C-110
Amount Passing ¼" Mesh	----	100.0% min.	----	ASTM C-110
Amount Passing 1/8" Mesh	10.0% max.	----	----	ASTM C-110
Amount Passing #30 Mesh	----	98.0% min.	----	ASTM C-110

Lime

PCID NO. 1074

Amount Passing #200 Mesh ----	80.0% min. (wet) ----	ASTM C-110
Amount Passing #20 Mesh ----	100%	ASTM C-110
Amount Passing #325 Mesh ----	91%	ASTM C-110

Physical Properties Type 3

Solids Content	35% - 45% by Weight
Bulk Density	10.4 to 11.2 lbs./gallon

3.0 Inspection & Rejection - Sampling for prior to/post- award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

4.0 Packaging –Product shall be packaged according to good commercial practice. Lime shall be shipped in multi-walled bags or bulk delivery. Type 3, Hydrated Lime Slurry shall be shipped by bulk delivery. A Certificate of Analysis certifying the percent of solids shall be provided with each delivery for Type 3, Hydrated Lime Slurry.

5.0 Material Master-SAP Material Master Numbers:

- 141171 - Type 1, Lime, Pebble: Rausch Creek
- 299540 - Type 2, Lime, Powdered, Hydrated

6.0 Documents-

(ASTM Testing Methods)
 American Society Testing & Materials
 100 Barr Harbor Drive
 West Conshohocken, PA. 19428

Quality Assurance Specialist: Gerald J. Grecek, CPPB

Section Director: Paul Wolf, C.P.M., CPPB



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

PCID NO. 1124
 Eff. 1/1/08

Sodium Hexametaphosphate

This Pennsylvania Commercial Item Description covers requirements for Sodium Hexametaphosphate used as a sequestering agent in water treatment. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for-Bids.

The GLASSY form of this product is NOT ACCEPTABLE

1. Requirements: The Sodium Hexametaphosphate shall be in powder form. The material must meet the following requirements:

CAS Number.....	10124-56-8
Chemical Formula.....	(NaPO ₃) ₆
Appearance.....	White, odorless powder
Formula Weight	611.77
Total Phosphates (as P ₂ O ₅).....	68% Min.
Iron	0.05% Max.
pH.....	5.7-7.3
Delivery.....	50 lb Bag

Using test methods and procedures outlined and described in the American Chemical Society *Specification for Reagent Chemicals*, latest edition.

2. Inspection & Rejection - Sampling for prior to/post- award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice. Sodium sulfite shall be shipped in 50 pound multi-walled bags.

4. Material Master – No Material Master established for this commodity.

5. Documents-

American Chemical Society (ACS Methods)
1155 Sixteenth Street, NW
Washington DC, 20036

Quality Assurance Specialist: Rick Bahl

Quality Assurance Supervisor: Robert Lester

Quality Assurance Director: Paul Wolf, CPM, CPPB



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

Sodium Hypochlorite
12.5% Liquid

(This item description supersedes PCID 1125, dated January 1, 2008)

PCID NO. 1125
Eff. 3/25/08

This Pennsylvania Commercial Item Description covers requirements for Sodium Hypochlorite. Sodium Hypochlorite is a compound that can be effectively used for water purification. It is used on a large scale for surface purification, bleaching, odor removal and water disinfection. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for-Bids.

1. Requirements – Must meet the current American Water Works Association Standard B300-04 for 12.5% by weight sodium hypochlorite.

CAS Number	7681-52-9
Chemical Formula	NaOCl
Appearance	Colorless to yellow liquid
Formula Weight	77.4

Sample shall be taken in accordance with ASTM D-501.

2. Inspection & Rejection - Sampling for prior to/post- award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice. Sodium Hypochlorite shall be shipped in 30 gallon carboys, 5 gallon plastic containers, 55 gallon drums or shipped in tank truck quantities, as requested by agency. Tank trucks will be equipped with pump and armored rubber or flexible steel hose for delivery liquid Sodium Hypochlorite of the into bulk storage tanks. Pumps shall be capable of pumping liquid magnesium hydroxide to a vertical height not to exceed 20 feet.

4. Material Master – No Material Master established for this commodity.

5. Documents-

(ASTM Testing Methods)
American Society Testing & Materials
100 Barr Harbor Drive
West Conshohocken, PA. 19428

Quality Assurance Specialist: Gerald Grecek, CPPB

Quality Assurance Supervisor: Robert Lester

Quality Assurance Director: Paul Wolf, CPM, CPPB



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

PCID NO. 1126
 Eff. 11/30/09

Aluminum Chloride Hydroxide Sulfate
 (Supersedes Eff. 1/1/08)

This Pennsylvania Commercial Item Description covers requirements for Aluminum Chloride Hydroxide Sulfate. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for-Bids.

1. Requirements – Must meet the current American Water Works Association Standard B408-03

CAS Number	39290-78-3
Appearance	Slightly Hazy to Clear
Color	Water White to Tan
Freezing Point	-26 Degrees F
UN Class	UN 1760 Corrosive Liquid
% Aluminum Oxide....	10.5 +/-0.5
% Aluminum	5.6 +/-0.3
% Basicity	55 +/-5
% Sulfate	2.7 +/-0.3
% Chloride	11.5 +/-2
pH	1.8 +/-0.3
Specific Gravity (60 Degrees F)	1.24 +/-0.03

Sample shall be taken in accordance with ASTM D-501.

2. Inspection & Rejection - Sampling for prior to/post- award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice. Delivery by bulk tanker.

4. Material Master – No Material Master established for this commodity.

5. Documents-

(ASTM Testing Methods)
American Society Testing & Materials
100 Barr Harbor Drive
West Conshohocken, PA. 19428

Quality Assurance Specialist: Riccardo Ayler

Quality Assurance Director: Paul Wolf, CPM, CPPB



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

Magnesium Hydroxide

PCID NO. 1128

Eff: 3/25/08

This Pennsylvania Commercial Item Description covers requirements for magnesium hydroxide; slurry is a white odorless aqueous suspension that offers a non-carbonate source of alkalinity and pH control. It is used for Acid Wastewater Neutralization, pH Control, Heavy Metal Removal, Aerobic, Anaerobic Microbiological Treatment and Potable Water Treatment. The product shall be NSF Certified. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for -Bids.

1. Requirements - The material must meet the following requirements (Percentages are by weight):

CAS number	1309-42-8
EINECS number	215-170-3
Chemical formula.....	Mg(OH) ₂
Appearance.....	White, odorless, slurry
Molecular weight.....	58.33
Solids.....	58% min - 68% max
Density.....	12.6 lb/gal min
MgO.....	91.5% Min (Dry Wt.)
pH.....	9.5 – 10.5

2. Inspection & Rejection - Sampling for prior to/post- award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice. Magnesium hydroxide shall be shipped in totes at approximately 2,800 pounds per container or 55 gal. drums, approximately 630 pounds per container or purchased in tank truck quantities, as requested by agency. Tank trucks will be equipped with pump and armored rubber or flexible steel hose for delivery liquid magnesium hydroxide of the into bulk storage tanks. Pumps shall be capable of pumping liquid magnesium hydroxide to a vertical height not to exceed 20 feet.

4. Material Master – SAP Material Master Number:

288663 – Magnesium Hydroxide

5. Documents:

(ASTM Testing Methods)

American Society Testing & Materials

100 Barr Harbor Drive

West Conshohocken, PA. 19428

Quality Assurance Specialist: Gerald Grecek, CPPB

Quality Assurance Supervisor: Robert Lester

Division Director: Paul Wolf, C.P.M., CPPB



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

PCID NO. 1134

Eff. 1/1/2013

Wastewater Nutrient Additive

(Supersedes PCID 1134. eff. 19 November 2011)

This Pennsylvania Commercial Item Description covers requirements for **carbon source requirements for wastewater nutrient additive**. Nutrient pollution has been identified as a principal cause in water quality issues. Pollutant nitrogen is typically found at high levels in wastewater and is removed using a biological process known as denitrification, which converts nitrogen into harmless components (water, nitrogen gas, and carbon dioxide). Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for-Bids.

1. Requirements:**Yellow Grease (in any form) is PROHIBITED**

Physical State:	Liquid
Odor:	Controlled
Color:	Typical
Specific Gravity @ 25c:	1.0+
Density (lbs/gal):	10.0
pH:	6.0-11.0
Solubility in water:	100.0%
VOC Concentration:	0.0% (EPA 8260B)
Freezing Point:	18.0F (-6.7C)
Ignitability:	Non-Flammable
BOD:	675,000 mg/l
Biodegradability:	Readily Biodegradable

2. Inspection & Rejection - Sampling for prior to/post-award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice and available as specified below;

- A. Pail
- B. Drum
- C. Tote
- D. Bulk <2000 gal
- E. Bulk >2000 gal

4. Material Master – No Material Master established for this commodity.

5. Documents-

Safety and Toxicology Information

- The VENDOR shall furnish the most current edition of the Materials Safety and Data Sheet (MSDS).
- MSDS on file at Fort Indiantown Gap Wastewater Treatment Plant

Quality Assurance Specialist: Riccardo Ayler

Quality Assurance Supervisor: Ed Myslewicz

Quality Assurance Manager: Janice Pistor



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

Ferric Chloride

PCID NO. 1135

Eff: 12/10/08

This Pennsylvania Commercial Item Description covers requirements for ferric chloride; a dark red and brown liquid. It is used for Acid Wastewater Neutralization, pH Control, Arsenic Removal, and Potable Water Treatment. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for -Bids.

1. Requirements - The material must meet the following requirements (Percentages are by weight):

CAS number	7705-08-0
Chemical formula.....	FeCl ₃
Appearance.....	Dark red/brown liquid
Solids.....	37% min - 42% max
Specific gravity.....	1.38-1.49
Viscosity.....	12.1 centipoises for 40% solution
pH.....	<2.0

2. Inspection & Rejection - Sampling for prior to/post- award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice.

4. Material Master – No Material Master established for this commodity.

5. Documents: N/A

Quality Assurance Specialist: Rick Bahl

Division Director: Paul Wolf, C.P.M., CPPB



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

Soda Ash Briquettes

PCID NO. 1136

Eff. 12/10/08

This Pennsylvania Commercial Item Description covers requirements of product for treatment of low pH, high metal content water leeching from abandoned mine sites. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for-Bids.

1.0 Requirements:

1.1 Formula: Na_2CO_3 MW(mol) 105.99

1.2 Description:White Tablet

1.3 Chemical Properties, % By Weight:

Na_2O 58.4

Na_2CO_3 99.8

Na_2SO_4 0.05 Max.

NaCl 0.05 Max.

1.4 Physical Properties:

Melting Point851c

Density66.8#/Cu. Ft.

2. Inspection & Rejection - Sampling for prior to/post- award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice.

4. Material Master – No Material Master established for this commodity.

5. Documents- N/A

Quality Assurance Specialist: Rick Bahl

Quality Assurance Director: Paul Wolf, CPM, CPPB



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

Wastewater Treatment Compound
Micronutrient Bacterial Booster

PCID NO. 1137

Eff. 12/9/08

This Pennsylvania Commercial Item Description covers requirements for wastewater bio-augmentation where nutrient deficiencies are present. The Commonwealth has use for a biological product to provide essential micronutrients to supplement bacteria's basic metabolic needs. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for-Bids.

1.0 Requirements:

1.1 Properties

- Perform under both aerobic and anaerobic conditions
- Stabilize biological populations in toxic and nutrient deficient conditions
- Control foaming and bulking caused by nutrient deficient conditions

1.2 Composition:

Ingredients:.....100% Kelp
CAS Number:84775-78-0
Form:Free flowing granular powder
pH:.....N/A
Nutrient Content:.....Natural organic nutrients
Soluability in Water:100%
Color:Typical
Odor:Marine odor

2. Inspection & Rejection - Sampling for prior to/post- award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice.

4. Material Master – No Material Master established for this commodity.

5. Documents- N/A

Quality Assurance Specialist: Rick Bahl

Quality Assurance Director: Paul Wolf, CPM, CPPB



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

**Wastewater Treatment Compound
Bio-Augmentation
Non-Pathogenic**

PCID NO. 1138
Eff. 12/09/08

This Pennsylvania Commercial Item Description covers requirements for wastewater bio-augmentation. The Commonwealth has use for biological product effective in enhancing municipal wastewater biology during winter/cold months. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for-Bids.

1.0 Requirements:

1.1 Properties

- Perform under both aerobic and anaerobic conditions
- Biodegrade organic material comprised of proteins, fats, carbohydrates and select hydrocarbons
- Reduce Sludge
- Provide competitive organisms to reduce filamentous activity

1.2 Composition:

Form:Free flowing granular powder
pH:6.0-8.5
Nutrient Content:Biological nutrients and stimulants
Bacterial Count:5 billion per gram
Soluability in Water:Not soluble. Disperses in water
Color:Typical
Odor:Controlled

2. Inspection & Rejection - Sampling for prior to/post- award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice.

4. Material Master – No Material Master established for this commodity.

5. Documents- N/A

Quality Assurance Specialist: Rick Bahl

Quality Assurance Director: Paul Wolf, CPM, CPPB



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

WASTEWATER ODOR NEUTRALIZER

PCID NO. 1139

Eff. 12/09/08

This Pennsylvania Commercial Item Description covers requirements for wastewater odor neutralizer. The Commonwealth has use for continuous odor neutralization in wastewater treatment plants for adsorption, neutralization and alteration of undesirable odors and fumes. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for-Bids.

1.0 Requirements:

1.1 Physical Properties

Physical State:Gel
 Color:Typical
 Odor:Controlled
 pH:7.0
 Viscosity:Gelled Solid
 Boiling Point:187-189 F.
 Solubility in Water:Partially

1.2 Composition:

<u>Component</u>	<u>CAS Number</u>	<u>Weight %</u>
Ethanol:	925-93-9	5.0
Soap, Sodium Salt:		5.0
Emulsifier:		3.0
1,2-Propanediol:	57-55-6	2.7
Essential Oils:		1.2
Water:		Balance

2. Inspection & Rejection - Sampling for prior to/post- award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice.

4. Material Master – No Material Master established for this commodity.

5. Documents- N/A

Quality Assurance Specialist: Rick Bahl

Quality Assurance Director: Paul Wolf, CPM, CPPB



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

Wastewater Treatment Compound
Fats, Oil and Grease (FOG) Control

PCID NO. 1140

Eff. 1/1/2013

(Supersedes PCID 1140. eff. 09 December 2008)

This Pennsylvania Commercial Item Description covers requirements for wastewater lift station Fats, Oil and Grease (FOG) control. The Commonwealth has use for a blend of naturally occurring ingredients as a carrier (corn, wheat bran, kelp) housing bacterial cultures, disodium phosphate and surfactant to soften and reduce FOG. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for-Bids.

1.0 Requirements:

1.1 Properties

- Perform under both aerobic and anaerobic conditions
- Continuous bacterial release
- Biodegradable
- Softens and reduces grease build-up

1.2 Composition:

CAS Number

Ingredients:Bacterial cultures
Disodium Phosphate7558-79-4
Sufactant68140-00-1

Form:Block or Liquid
pH Range:.....6.0-7.0
Nutrient Content:Natural organic nutrients; microbes and enzymes
Soluability in Water:Soluble
Color:Typical

Odor:Typical

2. Inspection & Rejection - Sampling for prior to/post-award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after-delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice.

4. Material Master – No Material Master established for this commodity.

5. Documents- Material Safety Data Sheet; Chemical Abstracts Service (CAS)

Quality Assurance Specialist: Riccardo Ayler

Quality Assurance Supervisor: Ed Myslewicz

Quality Assurance Manager: Janice Pistor



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

Cationic Emulsion Polymer Flocculate

PCID NO. 1142

Eff: 11/10/10

This Pennsylvania Commercial Item Description covers requirements for Cationic Emulsion Polymer Flocculate; a cloudy off white liquid. It is used for solids sedimentation, thickening, and dewatering process. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for -Bids.

1. Requirements:

Particle Size.....	10 % > 1.1 µm, 50 % > 0.9 µm and 90 % > 0.7 µm
Flash Point.....	93°C – product not combustible
Appearance.....	cloudy, off white liquid
Solids Content.....	40%
Specific gravity.....	1.03
Viscosity.....	approx. 970 cP (LVT, spindle #2@12rpm)
pH.....	3.5 – 5.5

2. Inspection & Rejection - Sampling for prior to/post- award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice.

4. Material Master – No Material Master established for this commodity.

5. Documents: N/A

Quality Assurance Specialist: Riccardo Ayler

Quality Assurance Manager: Del Border



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

Potassium Hydroxide

PCID NO. 1147

Effective - 01/01/2013

This Pennsylvania Commercial Item Description covers requirements for potassium hydroxide (drain opener/conditioner); the Commonwealth has use for potassium hydroxide that removes all organic obstructions; grease, hair, coffee grounds, soap, sludge, rags, paper, and food. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal, Invitation to Qualify, or Invitation for Bids.

1.0 Requirements - The material must meet the following requirements:

CAS number	1310-58-3
EINECS number	215-181-3
Appearance.....	Clear, pink, non-viscous, liquid w/bland odor
Chemical formula.....	HKO
Molecular weight.....	56.1056
Permissible Exposure Limit (PEL)	2 mg/m3
Time-Weighted Average (TWA)	2 mg/m3
pH.....	N/E

1.1 Properties

- Stability: Stable, but very hygroscopic.
- Dissolves exothermically in water.
- Incompatible with most metals, strong acids, acid chlorides, organic materials, zinc, aluminium, nitroalkanes, nitrobenzene, chlorine dioxide.
- Reacts vigorously with a wide variety of other materials. Readily absorbs water and carbon dioxide from the air.

2. Inspection & Rejection - Sampling for prior to/post-award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge

**Wastewater Treatment Compound
Potassium Hydroxide**

PCID NO. 1147

the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice.

4. Material Master – No Material Master established for this commodity.

5. Documents- Material Safety Data Sheet; Chemical Abstracts Service (CAS)

Quality Assurance Specialist: Riccardo Ayler

Quality Assurance Supervisor: Ed Myslewicz

Quality Assurance Manager: Janice Pistor



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

PCID NO. 1148**Sodium Chloride****Effective: 01/01/2013**

This Pennsylvania Commercial Item Description covers requirements for sodium chloride containing viable bacterial cultures used as water treatment chemical for grease degradation. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for -Bids.

1. Requirements – Must meet the following requirements:

CAS Number:	7647-14-5
Chemical Formula:	NaCl
Melting Point:	801° C, 1074 K, 1474° F
Boiling Point:	1413° C, 1686 K, 2575° F
Solubility:	in water: 359 g/L, in ammonia: 21.5 g/L, in methanol: 14.9 g/L

2. Inspection & Rejection - Sampling for prior to/post-award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after-delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice.

4. Material Master – No Material Master established for this commodity.

5. Documents-

(ASTM Testing Methods)
American Society Testing & Materials
100 Barr Harbor Drive
West Conshohocken, PA. 19428

Quality Assurance Specialist: Riccardo Ayler

Quality Assurance Supervisor: Ed Myslewicz

Quality Assurance Manager: Janice Pistor



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

Bacterial Grease Trap & Interceptor
(Live Baterial Suspension)

PCID NO. 1149

Eff. 1/1/2013

This Pennsylvania Commercial Item Description covers requirements for live bacterial grease trap and interceptor digester (also known as “Live Baterial Suspension”). The Commonwealth has use for a grease trap and interceptor digester that is designed to quickly break down and digest organic wastes in difficult conditions typically found in institutional environments. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for-Bids.

1.0 Requirements: Product shall be Comprised of a blend of aerobic, anaerobic and facultative organisms and have the ability to digest organic waste with little oxygen demand because of its anaerobic qualities allowing overloaded systems to function with greater efficiency and minimizes physical pumping of grease traps.

1.1 Properties

- Contain no dangerous acids or alkalis
- Control odors associated with plumbing and sewage
- Free of pathogenic bacteria
- Biodegradable

1.2 Composition:

Form:Liquid
 pH Range:.....7.0-9.0
 Boiling Point:212° F
 Soluability in Water:Miscible

2. Inspection & Rejection - Sampling for prior to/post-award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after

laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice. And available as specified below:

- a) One (1) and five (5) gallon containers;
- b) Drums (15, 30, and 55 gallon); and
- c) Totes

4. Material Master – No Material Master established for this commodity.

5. Documents- Material Safety Data Sheet

Quality Assurance Specialist: Riccardo Ayler

Quality Assurance Supervisor: Ed Myslewicz

Quality Assurance Manager: Janice Pistor



**COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)**

Bacterial Drain Maintainer

PCID NO. 1150

Eff. 1/1/2013

This Pennsylvania Commercial Item Description covers requirements for live bacterial drain maintainer. The Commonwealth has use for a maintainer that liquifies and loosens organic waste from institutional plumbing systems and eliminates the need for excess maintenance. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for-Bids.

1.0 Requirements: Product shall be Comprised of a blend of aerobic, anaerobic and facultative organisms with stabilized enzymes and have the ability to be used in food service operations, grease traps, septic tanks, tile fields, bath tubs, showers, sinks, toilets, urinals and kitchen drains.

1.1 Properties

- Contain no dangerous acids or alkalis
- Control odors associated with plumbing and sewage
- Free of pathogenic bacteria
- Biodegradable

1.2 Composition:

Form:Liquid
pH Range:.....7.0-9.0
Boiling Point:212 F
Soluability in Water:Miscible

2. Inspection & Rejection - Sampling for prior to/post-award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during

**Bacterial Drain Maintainer
(Living Bacterial Suspension)**

PCID NO. 1150

the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice. And available as specified below:

- a) One (1) and five (5) gallon containers;
- b) Drums (15, 30, and 55 gallon); and
- c) Totes

4. Material Master – No Material Master established for this commodity.

5. Documents- Material Safety Data Sheet

Quality Assurance Specialist: Riccardo Ayler

Quality Assurance Supervisor: Ed Myslewicz

Quality Assurance Manager: Janice Pistor



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

Clock Based Chemical Feed System

PCID NO. 1151

Eff. 1/1/2013

This Pennsylvania Commercial Item Description covers requirements for a Clock-Based Chemical Feed System. The Commonwealth has use for a chemical feed system for dispersing chemicals into drains, cooling towers, boilers and swimming pools, eliminating the need for manual distribution of chemicals. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for-Bids.

1.0 Requirements: Product shall have the ability to be used in drains, cooling towers, boilers and swimming pools.

1.1 Power Options

- 1.1.1** Electric Power 115 VAC 50/60 Hz
- 1.1.2** Electric Power 230 VAC 50/60 Hz
- 1.1.3** Battery Pack (optional)

1.2 Operating Tempetures

- 1.2.1** 35 – 104 F (5-40 C)

1.3 Pump Specifications

- 1.3.1** Peristaltic
- 1.3.2** Self Pumping/checking
- 1.3.3** 6 volt DC

1.4 Speed & Displacement Minimum

- 1.4.1** 100 rpm, 5 oz. per minute

2. Inspection & Rejection - Sampling for prior to/post-award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge

**Liquid Cleaning Compound
(Living Bacterial Suspension)**

PCID NO. 1151

the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice.

4. Material Master – No Material Master established for this commodity.

5. Documents- Material Safety Data Sheet

Quality Assurance Specialist: Riccardo Ayler

Quality Assurance Supervisor: Ed Myslewicz

Quality Assurance Manager: Janice Pistor



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

PCID NO. 1157
Eff. 10/01/17

Dry Ground Aluminum Sulfate
(Purified Grade)

This Pennsylvania Commercial Item Description covers requirements for Dry Ground Aluminum Sulfate. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for-Bids.

1. Requirements – Must meet the current American Water Works Association Standard B403-16 and comply with requirements of NSF/ANSI 60: Drinking Water Treatment Chemicals-Health Effects at a maximum dosage of 150 mg/L.

CAS Number	10043-01-3
Molecular Formula.....	Al ₂ (SO ₄) ₃
Color	Solid, white or off-white
UN Class	UN 3077
% Al ₂ O ₃	17.0-17.5
% Fe.....	0.001-0.03
% Insoluble	< 0.5
pH	3.3 +/- 0.5(1% solution)

Sample shall be taken in accordance with ASTM D-501.

2. Inspection & Rejection - Sampling for prior to/post- award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice. .

4. Documents-

(ASTM Testing Methods)
American Society Testing & Materials
100 Barr Harbor Drive
West Conshohocken, PA. 19428

American Water Works Association
6666 W Quincy Avenue
Denver, CO 80235

NSF International
PO Box 130140
79 N Dixboro Road
Ann Arbor, MI 48105

Quality Assurance Specialist: Bill Hugendubler, CPPB

Division Chief: Janice Pistor

Quality Assurance Supervisor: Brian Vulgaris



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

PCID NO. 1158
Eff. 10/01/17

Liquid Aluminum Sulfate (Alum)

This Pennsylvania Commercial Item Description covers requirements for Liquid Aluminum Sulfate. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for-Bids.

1. Requirements – Must meet the current American Water Works Association Standard B403-16 and comply with requirements of NSF/ANSI 60: Drinking Water Treatment Chemicals-Health Effects at a maximum dosage of 150 mg/L.

CAS Number	10043-01-3
Molecular Formula.....	Al ₂ (SO ₄) ₃ 14H ₂ O
Color	Clear to amber or light green liquid
UN Class	UN 3264
Specific Gravity @60°F.....	1.32-1.34
Product Weight.....	11.0-11.2 Lbs/Gal
% Al ₂ O ₃	8.0-8.4
% Basicity	0-0.4
Total Soluble Iron (FeO ₃).....	50 ppm max
pH(neat)	2.0-2.4
Dry Weight %.....	48.5 Min/49.0 Max.

Sample shall be taken in accordance with ASTM D-501.

2. Inspection & Rejection - Sampling for prior to/post- award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice. .

4. Documents-

(ASTM Testing Methods)
American Society Testing & Materials
100 Barr Harbor Drive
West Conshohocken, PA. 19428

American Water Works Association
6666 W Quincy Avenue
Denver, CO 80235

NSF International
PO Box 130140
79 N Dixboro Road
Ann Arbor, MI 48105

Quality Assurance Specialist: Bill Hugendubler, CPPB

Division Chief: Janice Pistor

Quality Assurance Supervisor: Brian Vulgaris



**COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)**

PCID NO. 1159
Eff. 11/02/17

Calcium Hypochlorite (68%)
(This item description supercedes PCID 1159 dated 10/01/2017)

This Pennsylvania Commercial Item Description covers requirements for Calcium Hypochlorite to include Cal Hypo Tablets and Cal Hypo Granular. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation for Bids.

- 1. Requirements** – Must meet the current American Water Works Association (AWWA) Standard B300-04 and comply with requirements of NSF/ANSI 60.

There will also be separate Cal-Hypo Tablets needed for wastewater treatment and not required to meet the AWWA Standard B300-04 and NSF/ANSI 60.

CAS Number	7778-54-3
Chemical Formula.....	CA(OCl) ₂
Color	White or grayish white
Active Ingredient, Calcium Chlorite, %.....	68 nom
Available Chlorine, %.....	65 min
Available Chlorine, %.....	71 max

Sample shall be taken in accordance with ASTM D-501.

2. Inspection & Rejection - Sampling for prior to/post- award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the supplier for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the supplier fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice.

4. Documents-

(ASTM Testing Methods)
American Society Testing & Materials
100 Barr Harbor Drive
West Conshohocken, PA. 19428

American Water Works Association
6666 W Quincy Avenue
Denver, CO 80235

NSF International
PO Box 130140
79 N Dixboro Road
Ann Arbor, MI 48105

Quality Assurance Specialist: Bill Hugendubler, CPPB

Division Chief: Janice Pistor

Quality Assurance Supervisor: Brian Vulgaris



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

PCID NO. 1160
Eff. 10/01/17

Sodium Bicarbonate

This Pennsylvania Commercial Item Description covers requirements for Sodium Bicarbonate. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for-Bids.

1. Requirements – Must meet the current American Water Works Association Standard B300-04 and comply with requirements of NSF/ANSI 60.

CAS Number	144-55-8
Chemical Formula.....	NaHCO ₃
Color	White
Taste.....	Slightly Alkaline
Assay (as NaHCO ₃ after drying).....	99.0% min
Loss on drying.....	0.25% max
Chloride (as Cl).....	0.015% max
Sulfur Compounds (as SO ₄).....	0.015% max
Arsenic (as As).....	2 ppm max
Heavy Metals (as Pb).....	5 ppm max

Sample shall be taken in accordance with ASTM D-501.

2. Inspection & Rejection - Sampling for prior to/post- award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice.

4. Documents-

(ASTM Testing Methods)
American Society Testing & Materials
100 Barr Harbor Drive
West Conshohocken, PA. 19428

American Water Works Association
6666 W Quincy Avenue
Denver, CO 80235

NSF International
PO Box 130140
79 N Dixboro Road
Ann Arbor, MI 48105

Quality Assurance Specialist: Bill Hugendubler, CPPB

Division Chief: Janice Pistor

Quality Assurance Supervisor: Brian Vulgaris



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

PCID NO. 1161
Eff. 10/01/17

Anionic Polyacrylamide Flocculate

This Pennsylvania Commercial Item Description covers requirements for Anionic Polyacrylamide Flocculate. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for-Bids.

1. Requirements – Dry granular powder product used for solids sedimentation, thickening, and dewatering process. .

Specific Gravity:.....	0.75 to 0.95
Degree of Charge, %:	33 to 50
Bulk Density, kg/m ³ :.....	835 +/- 50 to 900 +/-50
pH (0.5% aqueous solution):.....	5.0 to 7.0
Relative Molecular Weight:.....	Medium to High to Very High
Percent Volatile (by Wt.):.....	10 to 13 (water)
Anionic Charge (mole %):.....	Medium to High
Standard Viscosity:.....	Medium to High
High Rate Thickener:.....	Yes
Concentrate Tails Thickening:.....	Yes
Auto ignition Temperature:.....	<150 °C
Decomposition Temperature:.....	<150 °C
Viscosity at 25 ⁰ C (0.10% aqueous solution), cps:.....	100-250
Viscosity at 25 ⁰ C (0.25% aqueous solution), cps:.....	250-550
Viscosity at 25 ⁰ C (0.50% aqueous solution), cps:.....	500-1000

Field jar testing to recommend a polymer type based on laboratory bench scale testing is required.

Sample shall be taken in accordance with ASTM D-501.

2. Inspection & Rejection - Sampling for prior to/post- award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the contractor for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the vendor fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice. .

4. Documents-

(ASTM Testing Methods)
American Society Testing & Materials
100 Barr Harbor Drive
West Conshohocken, PA. 19428

Quality Assurance Specialist: Bill Hugendubler, CPPB Division Chief: Janice Pistor

Quality Assurance Supervisor: Brian Vulgaris



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

PCID NO. 1165
 Eff. 12/27/2018

Anionic Polyacrylamide Flocculate, Emulsion (Liquid Form)

This Pennsylvania Commercial Item Description covers requirements for Anionic Polyacrylamide Flocculant Emulsion; a liquid form product. It is used for solids sedimentation, thickening, and dewatering process at Acid Mine Drainage Treatment Plants to remove metal precipitates from the treated water. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for-Bids.

1. Requirements – Liquid product used for solids sedimentation, thickening, and dewatering process.

Chemical Type	Anionic Polyacrylamide
Specific Gravity at 25°C:	1.0 – 1.1
Appearance	Opaque Liquid
Relative Charge:	Very-Low to Low to Medium
Molecular Weight:	Low to Medium to High
Freezing Point:	-18°C (0°F)
Flash Point:	> 93°C (> 200°F)
pH	6.0 to 8.0
Viscosity at 25°C (cp / mPa.sec)	
0.50%	50 to 650
1.00%	100 – 1500
2.00%	300 to 3300

Sample shall be taken in accordance with ASTM D-501.

2. Inspection & Rejection - Sampling for prior to/post- award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the supplier for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the supplier fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice.

4. Documents-

(ASTM Testing Methods)
American Society Testing & Materials
100 Barr Harbor Drive
West Conshohocken, PA. 19428

Quality Assurance Specialist: Bill Hugendubler, CPPB

Quality Assurance Supervisor: Brian Vulgaris



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

PCID NO. 1166
Eff. 12/27/2018

Hydrogen Peroxide, Technical Grade 50%

This Pennsylvania Commercial Item Description covers requirements for Hydrogen Peroxide, Technical Grade 50%. Product shall conform to the following requirements unless otherwise specified in the Request for Proposal or Invitation-for-Bids.

1. Requirements

Concentration in water, % w/w	50.0-51.0
Appearance	Clear colorless, slightly viscous liquid
Apparent pH	1.0-3.0

Sample shall be taken in accordance with ASTM D-501.

2. Inspection & Rejection - Sampling for prior to/post- award testing, if required, will be as defined in the Invitation for Bid Proposal. Inspection may be made at place of manufacture at the option of the Commonwealth after an award has been made. Inspection for final acceptance shall be made at the place of delivery and/or after laboratory testing to determine whether product or service meets the specification requirements. Samples for inspection and after delivery testing shall be selected by simple random sampling. If defects are detected during the course of delivery, or after product has been delivered, the Commonwealth reserves the right to reject the defective product and require replacement at no cost to the Commonwealth, or cancel the contract and surcharge the supplier for any expense incurred by the cancellation of the contract and in securing satisfactory materials, if the supplier fails to apply timely and corrective measures.

3. Packaging –Product shall be packaged according to good commercial practice.

4. Documents-

(ASTM Testing Methods)
American Society Testing & Materials
100 Barr Harbor Drive
West Conshohocken, PA. 19428

Quality Assurance Specialist: Bill Hugendubler, CPPB

Quality Assurance Supervisor: Brian Vulgaris

Ferri+Plus 1000 Series

Ferri+Plus 1000 Series, Enhanced Ferric Chloride Series by PVS Technologies, Inc. or an approved equal. Ferric chloride, Methanamine, and N-Methyl polymer with c-m-oxirane Water to be used for potable water and wastewater plants.

No PCID is available for this product.