

1. Product and Company Identification

Product identifier	ProAcqua™ Pulse
Other means of identification	Profol Tonus , ProAcqua Pulse Ni
Synonyms	Not available.
Recommended use	Source of plant nutrients for food and non-food crops
Recommended restrictions	None known.
Manufacturer information	Compass Minerals USA Inc. 9900 West 109th Street, Suite 100 Overland Park, KS 66210 US Phone (913) 344-9200
Supplier	Compass Minerals Manitoba Inc. 6700 Century Avenue Mississauga L5N 6A4 CA http://www.compassminerals.com/ Phone (905) 567-0231 techservicesrequests @compassminerals.com
CHEMTREC	1-800-424-9300
CANUTEC	1-613-996-6666

2. Hazards Identification

Physical hazards	Not classified.
Health hazards	Acute toxicity, oral Category 4 Serious eye damage/eye irritation Category 2 Sensitization, respiratory Category 1 Sensitization, skin Category 1 Carcinogenicity Category 2
Environmental hazards	Not classified.
WHMIS 2015 defined hazards	Not classified
Label elements	



Signal word Danger

Hazard statement
Harmful if swallowed.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Suspected of causing cancer.

Precautionary statement

Prevention

Do not handle until all safety precautions have been read and understood.
Do not eat, drink or smoke when using this product.
Avoid breathing dust.
Wear respiratory protection.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
Contaminated work clothing should not be allowed out of the workplace.

Response

IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Specific treatment (see information on this label).
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
IF exposed or concerned: Get medical advice/attention.

Storage

Store locked up.

Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC)	None known
WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC)	None known
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	26.89% of the mixture consists of component(s) of unknown acute oral toxicity.

3. Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
Metal amine chelate #1		HMIRA 11554	HMIRA 11554
Metal amine chelate #2		HMIRA 11554	HMIRA 11554
Metal salt		HMIRA 11554	HMIRA 11554
Organic acid		HMIRA 11554	HMIRA 11554

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments The filing date associated with this trade secret exemption is 2017-05-26

4. First Aid Measures

Inhalation	IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
Skin contact	IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Specific treatment (see information on this label).
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
Most important symptoms/effects, acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Difficulty in breathing. May cause an allergic skin reaction. Dermatitis. Rash.
Indication of immediate medical attention and special treatment needed	Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Not available.
Specific hazards arising from the chemical	Not available.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Use water spray to cool unopened containers.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.
Hazardous combustion products	May include and are not limited to: Oxides of sodium.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Before attempting clean up, refer to hazard data given above. Use broom or dry vacuum to collect material for proper disposal without raising dust. Rinse area with water. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. For waste disposal, see section 13 of the SDS.

Environmental precautions

Do not discharge into lakes, streams, ponds or public waters.

7. Handling and Storage

Precautions for safe handling

Do not handle until all safety precautions have been read and understood.
Avoid contact with eyes, skin, and clothing.
Do not taste or swallow.
Do not breathe dust.
Provide adequate ventilation.
Observe good industrial hygiene practices.
Wash thoroughly after handling.
When using do not eat or drink.

Conditions for safe storage, including any incompatibilities

Store in original tightly closed container.
Store away from incompatible materials (see Section 10 of the SDS).
Keep out of reach of children.
Store locked up.

8. Exposure Controls/Personal Protection

Occupational exposure limits

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Metal amine chelate #2 (CAS HMIRA 11554)	TWA	0.02 mg/m3	
Metal salt (CAS HMIRA 11554)	TWA	0.5 mg/m3	Respirable.

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Metal amine chelate #2 (CAS HMIRA 11554)	TWA	0.02 mg/m3	
Metal salt (CAS HMIRA 11554)	TWA	0.5 mg/m3	Respirable.

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
Metal amine chelate #2 (CAS HMIRA 11554)	TWA	0.02 mg/m3	
Metal salt (CAS HMIRA 11554)	TWA	0.5 mg/m3	Respirable fraction.

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Metal amine chelate #2 (CAS HMIRA 11554)	TWA	0.02 mg/m3	
Metal salt (CAS HMIRA 11554)	TWA	0.5 mg/m3	Respirable fraction.

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
Metal amine chelate #2 (CAS HMIRA 11554)	TWA	0.02 mg/m3	
Metal salt (CAS HMIRA 11554)	TWA	5 mg/m3	

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Metal salt (CAS HMIRA 11554)	PEL	5 mg/m3

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Metal amine chelate #2 (CAS HMIRA 11554)	TWA	0.02 mg/m3	
Metal salt (CAS HMIRA 11554)	TWA	0.5 mg/m3	Respirable fraction.

Biological limit values**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Metal amine chelate #2 (CAS HMIRA 11554)	15 µg/l	Cobalt	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear chemical goggles.

Skin protection

Hand protection Wear suitable gloves. Confirm with a reputable supplier first.

Other As required by employer code.

Respiratory protection Wear dust mask.

Thermal hazards Not applicable.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. Physical and Chemical Properties

Appearance	Powder
Physical state	Solid.
Form	Solid.
Color	Purple
Odor	Not available.
Odor threshold	Not available.
pH	4.1 (10% solution)
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Pour point	Not applicable.
Specific gravity	Not available.
Partition coefficient (n-octanol/water)	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	Not available.

Solubility(ies)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not applicable.
Other information	
Density	0.70 g/cm ³
Explosive limit	Not applicable.
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Solubility (other)	400 g/l

10. Stability and Reactivity

Reactivity	May react with incompatible materials.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	May include and are not limited to: Oxides of sodium.

11. Toxicological Information

Routes of exposure Eye, Skin contact, Inhalation, Ingestion.

Information on likely routes of exposure

Ingestion	Harmful if swallowed. May cause stomach distress, nausea or vomiting.
Inhalation	Prolonged inhalation may be harmful. May cause sensitization by inhalation.
Skin contact	May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Difficulty in breathing. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity Harmful if swallowed.

Components	Species	Test Results
Metal amine chelate #1 (CAS HMIRA 11554)		
Acute		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	1600 mg/kg, Produquímica Industry and Trade S.A. 1244 mg/kg, ipr-mus, RTECS
Metal amine chelate #2 (CAS HMIRA 11554)		
Acute		
<i>Dermal</i>		
LD50	Rat	8127.5 mg/kg, Produquímica Industry and Trade S.A.
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Mouse	1244 mg/kg, Produquímica Industry and Trade S.A.

Components	Species	Test Results
Metal salt (CAS HMIRA 11554)		
Acute		
Dermal		
LD50	Not available	
	Rat	> 2000 mg/kg, 24 Hours
Inhalation		
LC50	Rat	> 1.9 mg/L, 4 Hours 2080 mg/m3
Oral		
LD50	Not available	
	Rat	3883 mg/kg
Organic acid (CAS HMIRA 11554)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg, 24 Hours, ECHA
Inhalation		
LC50	Not available	
Oral		
LD50	Mouse	5400 mg/kg, ECHA 5040 mg/kg, HSDB
	Rat	11700 mg/kg, ECHA 6730 mg/kg, HSDB
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Exposure minutes	Not available.	
Erythema value	Not available.	
Oedema value	Not available.	
Serious eye damage/eye irritation	Causes serious eye irritation.	
Corneal opacity value	Not available.	
Iris lesion value	Not available.	
Conjunctival reddening value	Not available.	
Conjunctival oedema value	Not available.	
Recover days	Not available.	
Respiratory or skin sensitization		
Canada - Alberta OELs: Irritant		
Metal salt (CAS HMIRA 11554)	Irritant	
Respiratory sensitization	May cause allergy or asthma symptoms or breathing difficulties if inhaled.	
Skin sensitization	May cause an allergic skin reaction.	
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	See below.	
ACGIH Carcinogens		
Metal amine chelate #2 (CAS HMIRA 11554)	A3 Confirmed animal carcinogen with unknown relevance to humans.	
Metal salt (CAS HMIRA 11554)	A3 Confirmed animal carcinogen with unknown relevance to humans.	
Canada - Manitoba OELs: carcinogenicity		
Cobalt and inorganic compounds, as Co (CAS HMIRA 11554)	Confirmed animal carcinogen with unknown relevance to humans.	
MOLYBDENUM, SOLUBLE COMPOUNDS, AS MO, RESPIRABLE FRACTION (CAS HMIRA 11554)	Confirmed animal carcinogen with unknown relevance to humans.	
Canada - Quebec OELs: Carcinogen category		
Metal amine chelate #2 (CAS HMIRA 11554)	Detected carcinogenic effect in animals.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Metal amine chelate #2 (CAS HMIRA 11554)	Volume 52 - 2B Possibly carcinogenic to humans.	

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Teratogenicity	Not available.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological Information

Ecotoxicity See below

Ecotoxicological data

Components		Species	Test Results
Metal amine chelate #1 (CAS HMIRA 11554)			
Fish	LC50	Fish	> 100 mg/L, 96 hours
Aquatic			
Crustacea	EC50	Tubificid worm (Tubifex tubifex)	42.48 - 65.64 mg/L, 48 hours
Fish	LC50	Striped bass (Morone saxatilis)	> 79.8 mg/L, 96 hours
<i>Acute</i>			
Crustacea	EC50	Daphnia magna	120 mg/L, 72 hr
Aquatic			
<i>Acute</i>			
Fish	LC50	Bluegill (Lepomis macrochirus)	1516 mg/L, 96 hr

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Mobility in general	Not available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions	Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

Transport of Dangerous Goods (TDG) Proof of Classification	In accordance with Part 2.2.1 (SOR/2014-152) of the Transportation of Dangerous Goods Regulations, we certify that the classification of this product is correct as of the SDS date of issue.
U.S. Department of Transportation (DOT)	
Not regulated as dangerous goods.	
Transportation of Dangerous Goods (TDG - Canada)	
Not regulated as dangerous goods.	
IATA/ICAO (Air)	
Not regulated as dangerous goods.	
IMDG (Marine Transport)	
Not regulated as dangerous goods.	

15. Regulatory Information

Canadian federal regulations	This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.
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Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

WHMIS 2015 Exemptions

Controlled

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Metal amine chelate #2 (CAS HMIRA 11554) Listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**Hazard categories**

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

SARA 302 Extremely hazardous substance

No

SARA 311/312 Hazardous chemical

No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Metal amine chelate #2 (CAS HMIRA 11554)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

US state regulations

See below

US - California Hazardous Substances (Director's): Listed substance

Metal amine chelate #2 (CAS HMIRA 11554) Listed.
Metal salt (CAS HMIRA 11554) Listed.

US - Illinois Chemical Safety Act: Listed substance

Metal amine chelate #2 (CAS HMIRA 11554)

US - Louisiana Spill Reporting: Listed substance

Metal amine chelate #2 (CAS HMIRA 11554) Listed.

US - Minnesota Haz Subs: Listed substance

Metal amine chelate #2 (CAS HMIRA 11554) Listed.
Metal salt (CAS HMIRA 11554) Listed.

US - New Jersey RTK - Substances: Listed substance

Metal amine chelate #2 (CAS HMIRA 11554)

US - Texas Effects Screening Levels: Listed substance

Metal salt (CAS HMIRA 11554) Listed.
Organic acid (CAS HMIRA 11554) Listed.

US - Washington Chemical of High Concern to Children: Listed substance

Metal amine chelate #2 (CAS HMIRA 11554)
Metal salt (CAS HMIRA 11554)

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Metal amine chelate #2 (CAS HMIRA 11554)

US. Pennsylvania Worker and Community Right-to-Know Law

Metal amine chelate #2 (CAS HMIRA 11554)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Inventory status

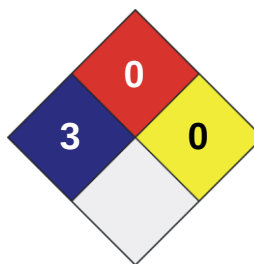
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	* 3
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X

**Disclaimer**

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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03

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Prepared by

Dell Tech Laboratories, Ltd. Phone: (519) 858-5021

Other information

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.