

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Identity

Solu-Sul™

Alternate NamesN-P-K 0-1-4
(12%S, 1% Ca, 1%Fe)

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

Intended use

See Technical Data Sheet.

Application Method

See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company NamePurebase Corporation
1670 Sierra Ave., Suite 402
Yuba City, CA 95993**Emergency****Customer Service:**

530-671-7626

2. Hazard identification of the product

2.1. Classification of the substance or mixture

Skin Irrit. 2;H315

Causes skin irritation.

Eye Irrit. 2;H319

Causes serious eye irritation.

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



Warning

H315 Causes skin irritation.

H319 Causes serious eye irritation.

[Prevention]:

P264 Wash thoroughly after handling.

P280 Wear protective gloves / eye protection / face protection.

[Response]:

P302+352 IF ON SKIN: Wash with plenty of soap and water.

P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P321 Specific treatment (see information on this label).

P337+313 If eye irritation persists: Get medical advice / attention.

P362 Take off contaminated clothing and wash before reuse.

[Storage]:

No GHS storage statements

[Disposal]:

No GHS disposal statements

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Sulfur CAS Number: 0007704-34-9	10 - 25	Skin Irrit. 2;H315	[1]
Potassium Oxide CAS Number: 0012136-45-7	1.0 - 10		[1]
Iron CAS Number: 0007439-89-6	1.0 - 10		[1]
Calcium CAS Number: 0007440-70-2	1.0 - 10	Water react. 2;H261	[1]
Phosphoric acid CAS Number: 0007664-38-2	1.0 - 10	Skin Corr. 1B;H314	[1][2]

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
Inhalation	Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
Eyes	Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.
Skin	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
Ingestion	If large quantities swallowed may cause gastrointestinal irritation. Seek medical attention.

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

Overview	Do Not Inhale or ingest product. May Cause Irritation to eyes or sensitive skin. Mild irritation to mucous membranes, respiratory passages and irritate eyes. Non-systemic. Skin: No incidents of irritation to the skin reported. Inhalation: Not Applicable Ingestion: Low toxicity LD50 unknown. Exposure Standard: None established. See section 2 for further details.
Eyes	Causes serious eye irritation.
Skin	Causes skin irritation.

5. Fire-fighting measures

5.1. Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO₂, powder, water spray.
Do not use; water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: No hazardous decomposition data available.

5.3. Advice for fire-fighters

Wear full protective clothing and self-contained breathing apparatus. Use agents appropriate to surrounding materials to extinguish fire. Evacuate downwind if large quantities are involved in fire.

Cool closed containers exposed to fire by spraying them with water. Do not allow run off water and contaminants from fire fighting to enter drains or water ways.

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6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

Spill Clean-up: Sweep up by mechanical means.

Waste Disposal: Put into proper containers and dispose of in accordance with all local, state and federal regulations.

7. Handling and storage

7.1. Precautions for safe handling

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Incompatible materials: No data available.

Keep locked up and out of reach of children. Keep container tightly closed and in a well-ventilated place.

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.

8. Exposure controls and personal protection

8.1. Control parameters
Exposure

CAS No.	Ingredient	Source	Value
0007439-89-6	Iron	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

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SDS Revision Date:

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0007440-70-2	Calcium	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0007664-38-2	Phosphoric acid	OSHA	TWA 1 mg/m3
		ACGIH	TWA: 1 mg/m3 STEL: 3 mg/m3
		NIOSH	TWA 1 mg/m3 ST 3 mg/m3
		Supplier	No Established Limit
0007704-34-9	Sulfur	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0012136-45-7	Potassium Oxide	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

The exposure limits for nuisance dust are: OSHA PEL: 15 mg/m3 (50 mppcf*) TWA, ACGIH 10 mg/m3.

Carcinogen Data

CAS No.	Ingredient	Source	Value
0007439-89-6	Iron	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0007440-70-2	Calcium	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0007664-38-2	Phosphoric acid	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0007704-34-9	Sulfur	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0012136-45-7	Potassium Oxide	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

8.2. Exposure controls

Respiratory	Use NIOSH/MSHA approved respirator, following manufacturer's recommendations when concentrations exceed permissible exposure limits.
Eyes	Safety Goggles
Skin	None required
Engineering Controls	Mechanical to keep dust below nuisance TLV 15 mg/m3
Other Work Practices	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

Appearance	light yellow Solid
Odor	Slightly Sulfurous
Odor threshold	Not Measured
pH	Not Measured
Melting point / freezing point	Not Measured
Initial boiling point and boiling range	Not Measured
Flash Point	Not Measured
Evaporation rate (Ether = 1)	Not Measured
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: Not Measured Upper Explosive Limit: Not Measured
Vapor pressure (Pa)	Not Measured
Vapor Density	Not Measured
Specific Gravity	.8-.9
Solubility in Water	Not Measured
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	Not Measured
Decomposition temperature	Not Measured
Viscosity (cSt)	Not Measured

9.2. Other information

No other relevant information.

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

No hazardous decomposition data available.

11. Toxicological information

Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LD50, ppm
Sulfur - (7704-34-9)	8,437.00, Rat - Category: NA	5,587.00, Guinea Pig - Category: NA	9.23, Rat - Category: 3	No data available	No data available
Potassium Oxide - (12136-45-7)	No data available	No data available	No data available	No data available	No data available
Iron - (7439-89-6)	30,000.00, Rat - Category: NA	No data available	No data available	No data available	No data available
Calcium - (7440-70-2)	No data available	No data available	No data available	No data available	No data available
Phosphoric acid - (7664-38-2)	1,530.00, Rat - Category: 4	2,740.00, Rabbit - Category: 5	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	2	Causes skin irritation.
Serious eye damage/irritation	2	Causes serious eye irritation.
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

12. Ecological information

12.1. Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Sulfur - (7704-34-9)	866.00, Danio rerio	Not Available	Not Available
Potassium Oxide - (12136-45-7)	Not Available	Not Available	Not Available
Iron - (7439-89-6)	1.22, Cyprinus carpio	33.00, Crangon crangon	Not Available
Calcium - (7440-70-2)	Not Available	Not Available	Not Available
Phosphoric acid - (7664-38-2)	Not Available	Not Available	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	Not Applicable	Not Regulated	Not Regulated
14.2. UN proper shipping name	Not Regulated	Not Regulated	Not Regulated
14.3. Transport hazard class(es)	DOT Hazard Class: Not Applicable DOT Label: ---	IMDG: Not Applicable Sub Class: Not Applicable	Air Class: Not Applicable
14.4. Packing group	Not Applicable	Not Applicable	Not Applicable
14.5. Environmental hazards			
IMDG	Marine Pollutant: No		
14.6. Special precautions for user	No further information		

15. Regulatory information

Regulatory Overview	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
Toxic Substance Control Act (TSCA)	All components of this material are either listed or exempt from listing on the TSCA Inventory.
WHMIS Classification	D2B
US EPA Tier II Hazards	Fire: No Sudden Release of Pressure: No Reactive: No Immediate (Acute): Yes

Delayed (Chronic): No

EPCRA 311/312 Chemicals and RQs (lbs):

Phosphoric acid (5,000.00)

EPCRA 302 Extremely Hazardous :

(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals:

(No Product Ingredients Listed)

Proposition 65 - Carcinogens (>0.0%):

(No Product Ingredients Listed)

Proposition 65 - Developmental Toxins (>0.0%):

(No Product Ingredients Listed)

Proposition 65 - Female Repro Toxins (>0.0%):

(No Product Ingredients Listed)

Proposition 65 - Male Repro Toxins (>0.0%):

(No Product Ingredients Listed)

N.J. RTK Substances (>1%):

Calcium

Phosphoric acid

Potassium Oxide

Sulfur

Penn RTK Substances (>1%):

Calcium

Phosphoric acid

Sulfur

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H261 In contact with water releases flammable gases.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

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