

Offer Sheet

Product	Non haz powders: Lime grit ALMP (Alkylated Linear Mono-Phosphate) MALP (Mixed Alkyl Linear Phosphate)
Quantity	Lime grit (6-8 tons) ALMP (6-8 tons) MALP (6-8 tons)
Net weight	
Packaging	10 yard roll off boxes
Availability	Lime grit ongoing (1.3Mlbs. annually) ALMP one time MALP one time
Location	Augusta, GA
Date	3/25/26
COA & SDS	Attached below



Lime grit is a **coarse, granular byproduct** from the causticizing/lime kiln loop in pulp & paper mills. Chemically, it is predominantly **calcium carbonate (CaCO₃)** with trace **CaO/Ca(OH)₂** and inert contaminants (sand, metal fines).

1) Construction & Civil Applications (Highest Volume Use)

Use cases:

- Road base / subgrade stabilization
- Fill material for embankments
- Aggregate replacement in low-spec applications
- Soil stabilization (limited vs quicklime)

Why it works:

- High calcium content → improves soil structure
 - Coarse particle size → good load-bearing filler
 - Low cost vs quarried aggregate
-

2) Landfill Operations

Use cases:

- Daily or intermediate cover
- Alternative to soil cover
- Stabilization of wet waste zones

Functional value:

- Mild alkalinity helps control odor and microbial activity
- Absorbs moisture → improves handling conditions

Buyer profile:

- Municipal landfills
 - Private waste operators
-

3) Agricultural Soil Amendment (Conditional Market)

Use cases:

- Soil pH adjustment (liming agent)
- Calcium source for deficient soils

Limitations:

- Lower reactivity than finely ground ag lime
- Variability in composition (metals, sand)
- Often requires testing to meet ag standards

Best fit:

- Local farms willing to accept **low-cost bulk lime substitute**
-

4) Wastewater & Environmental Applications

Use cases:

- pH adjustment in low-spec systems
- Neutralization of acidic waste streams
- Sludge conditioning (limited)

Constraints:

- Inconsistent reactivity vs commercial lime
 - Not suitable where tight dosing control is required
-

5) Cement / Brick / Low-Grade Materials

Use cases:

- Feedstock supplement in cement kilns (minor)
 - Raw material in bricks or blocks
 - General mineral filler
-

6) Internal Recycling (Most Common Use)

Before external sale, many mills reuse lime grit for:

- Kiln feed blending (limited)
- On-site road base
- Land application



Analysis Report

Report # 65485
Report Date: 12/12/2025
Samples Received: 12/01/2025

Analysis (Method): pH (Method SW846 9045D), TCLP Volatiles (Method SW846/8260D), TCLP Semivolatiles (Method SW846/8270E), TCLP Mercury (Method SW846/7470A), TCLP ICP Metals (Method SW846/6010D), Reactive Cyanide (Method SW846 9012), Reactive Sulfide (Method SW 846 9034), PCB's (Method SW846 8082A), Paint Filter (Method SW846 9095B) , Flashpoint (Method SW846 1010B)

CSRA ID #	Sample Description/Location	Date Sampled	Time	Analysis	Result	Reporting Limit	Units	Date Analyzed	Time	Analyst
25-10881	DRT 1730	12/01/25	0815	pH	Q 4.4	0.01	NA	12/04/25	1310	AH ²
				Paint Filter Test (Free liquid)	Negative	0	mL	12/04/25	1635	IG ²
				Flashpoint	>180	0	°F	12/05/25	1111	IG ²
				Reactive Cyanide	BRL	0.95	mg/Kg	12/03/25	1630	GD ²
				Reactive Sulfide	BRL	98	mg/Kg	12/08/25	1235	GD ²
TCLP Volatile Organics										
				1,1-Dichloroethene	BRL	0.10	mg/L	12/09/25	1429	C1K ²
				1,2-Dichloroethane	BRL	0.10	mg/L	12/09/25	1429	C1K ²
				2-Butanone (MEK)	BRL	1.00	mg/L	12/09/25	1429	C1K ²
				Benzene	BRL	0.10	mg/L	12/09/25	1429	C1K ²
				Carbon tetrachloride	BRL	0.10	mg/L	12/09/25	1429	C1K ²
				Chlorobenzene	BRL	0.10	mg/L	12/09/25	1429	C1K ²
				Chloroform	BRL	0.10	mg/L	12/09/25	1429	C1K ²
				Tetrachloroethene	BRL	0.10	mg/L	12/09/25	1429	C1K ²
				Trichloroethene	BRL	0.10	mg/L	12/09/25	1429	C1K ²
				Vinyl Chloride	BRL	0.10	mg/L	12/09/25	1429	C1K ²
TCLP Semi-Volatile Organics										
				1,4-Dichlorobenzene	BRL	0.10	mg/L	12/06/25	2016	OK ²
				2,4,5-Trichlorophenol	BRL	0.25	mg/L	12/06/25	2016	OK ²
				2,4,6-Trichlorophenol	BRL	0.10	mg/L	12/06/25	2016	OK ²
				2,4-Dinitrotoluene	BRL	0.10	mg/L	12/06/25	2016	OK ²
				Hexachlorobenzene	BRL	0.10	mg/L	12/06/25	2016	OK ²
				Hexachlorobutadiene	BRL	0.10	mg/L	12/06/25	2016	OK ²
				Hexachloroethane	BRL	0.10	mg/L	12/06/25	2016	OK ²

CSRA ID #	Sample Description/Location	Date Sampled	Time	Analysis	Result	Reporting Limit	Units	Date Analyzed	Time	Analyst
25-10881	DRT 1730	12/01/25	0815	TCLP Semi-Volatile Organics continued						
				m,p-Cresol	BRL	0.10	mg/L	12/06/25	2016	OK ²
				Nitrobenzene	BRL	0.10	mg/L	12/06/25	2016	OK ²
				o-Cresol	BRL	0.10	mg/L	12/06/25	2016	OK ²
				Pentachlorophenol	BRL	0.25	mg/L	12/06/25	2016	OK ²
				Pyridine	BRL	0.10	mg/L	12/06/25	2016	OK ²
				TCLP Metals						
				Arsenic	BRL	0.25	mg/L	12/04/25	1528	MT ²
				Barium	BRL	0.50	mg/L	12/04/25	1528	MT ²
				Cadmium	BRL	0.025	mg/L	12/04/25	1528	MT ²
				Chromium	BRL	0.050	mg/L	12/04/25	1528	MT ²
				Lead	BRL	0.050	mg/L	12/04/25	1528	MT ²
				Selenium	BRL	0.10	mg/L	12/04/25	1528	MT ²
				Silver	BRL	0.025	mg/L	12/04/25	1528	MT ²
				Mercury	BRL	0.0050	mg/L	12/04/25	1926	TA ²
				PCB's						
				PCB 1016	BRL	62	ug/Kg	12/04/25	1451	NT ²
				PCB 1221	BRL	62	ug/Kg	12/04/25	1451	NT ²
				PCB 1232	BRL	62	ug/Kg	12/04/25	1451	NT ²
				PCB 1242	BRL	62	ug/Kg	12/04/25	1451	NT ²
				PCB 1248	BRL	62	ug/Kg	12/04/25	1451	NT ²
				PCB 1254	BRL	62	ug/Kg	12/04/25	1451	NT ²
				PCB 1260	BRL	62	ug/Kg	12/04/25	1451	NT ²

Respectfully submitted,

 Maya Watson, Laboratory Manager



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Report # 65485
Samples Received: 12/01/2025

Quality Assurance for analysis is in accordance with EPA guidelines and/or CSRA Analytical established limits. Any discrepancies associated with the analysis contained in this report will be documented and reported in an Analysis Report Narrative.

All analysis, when required, are performed using EPA Methods, ASTM and Standard Methods and are certified to meet all requirement of NELAC and TNI Standards. Also, soil and sludge analysis will be reported on a dry weight basis, unless stated otherwise. Analysis performed at these facilities holding the following certifications:

NELAP/State of Florida Laboratory # E87619¹ Effective: July 1, 2025 Expires: June 30, 2026
For Analysis of Drinking Water- Microbiology, Drinking Water - Primary Inorganic Contaminants, Non-Potable Water - General Chemistry, Non-Potable Water - Microbiology
US EPA Labcode GA00043 State of GA Wastewater Laboratory Analyst Certification #014113
GA Water and Pollution Control Association, Inc. Member ID#12988

NELAP/State of Florida Laboratory # E87582² Effective: July 1, 2025 Expires: June 30, 2026
For Analysis of Drinking Water - Microbiology, Drinking Water - Primary Inorganic Contaminants, Drinking Water - Secondary Inorganic Contaminants, Non-Potable Water - Extractable Organics, Non-Potable Water - General Chemistry, Non-Potable Water Metals, Non-Potable Water - Microbiology, Non-Potable Water - Pesticides, Herbicides, PCB's, Non-Potable Water - Volatile Organics, Solid and Chemical Material - Extractable Organics, Solid and Chemical Materials - General Chemistry, Solid and Chemical Materials - Metals, Solid and Chemical Materials - Pesticides, Herbicides, PCB's, Solid and Chemical Materials, Volatile Organics

BRL= Below Reporting Limit

Q=Sample Received Out of Hold Time

I=Reported Value between MDL and PQL

E=Estimated Value

N=Analyte Not NELAC Certified

*=Not reported due to interferences

J6=Reported value failed to meet established QC Criteria

J2=DO Depletion falls outside of optimum 1mg/L DO total depletion

Y=The analysis was from an improperly preserved sample (no ice)

J9=Sample volume used yields residue that falls outside of the optimum 2.5 to 200 mg per filter

T=Value reported is less than the laboratory MDL

PRAYPHOS ALMP

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Date of issue: 3/9/2011

Revision date: 12/15/2015

Supersedes: 7/30/2012

Version: 2.2

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

1.1. Product identifier

Product form	: Substance
Trade name	: PRAYPHOS ALMP
Chemical name	: Métaphosphate d'aluminium
EC no	: 237-415-3
CAS No	: 13776-88-0
REACH registration No	: Aucun numéro d'enregistrement n'est disponible pour cette substance car soit la substance ou son utilisation sont dispensées d'enregistrement selon l'article 2 de la réglementation REACH (EC) N° 1907/2006 soit le tonnage annuel ne nécessite aucun enregistrement ou l'enregistrement est prévu pour un délai ultérieur.
Product code	: EUR-0244
Formula	: Al(PO ₃) ₃

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

1.2.1. Relevant identified uses

Main use category : Industrial use

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA Belfast	0870 600 6266 (UK only),	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital, Guy's & St Thomas' Hospital Trust	Dudley Road B18 7QH Birmingham	0844 892 0111 (UK only, Monday to Friday, 08.00 to 18.00 hours)	
United Kingdom	National Poisons Information Service (Cardiff Centre) Gwenwyn Ward, Wolfson Unit	Penarth CF64 2XX Cardiff	0844 892 0111 (UK only, Monday to Friday, 08.00 to 18.00 hours)	
United Kingdom	NPIS Edinburgh (Scottish Poisons Information Bureau) Royal Infirmary of Edinburgh, Centre Hospitalier Universitaire Bab el Oued	51 Little France Crescent EH16 4SA Edinburgh	0844 892 0111 (UK only, Monday to Friday, 08.00 to 18.00 hours)	
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Centre Hospitalier Universitaire de Constantine	Avonley Road SE14 5ER London	0870 243 2241	
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre	Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle	0844 892 0111 (UK only, Monday to Friday, 08.00 to 18.00 hours)	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

PRAYPHOS ALMP

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

2.2. Label elements

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

Labelling not applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : PRAYPHOS ALMP
CAS No : 13776-88-0
EC no : 237-415-3

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Aluminium metaphosphate	(CAS No) 13776-88-0 (EC no) 237-415-3	>= 96	Not classified

Full text of H-statements: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove victim to fresh air.
First-aid measures after skin contact : Rinse immediately with plenty of water. Remove contaminated clothing and shoes. Take off contaminated clothing and wash before reuse.
First-aid measures after eye contact : In case of eye contact, immediately rinse with clean water for 10-15 minutes. If feeling unwell, immediately seek medical attention.
First-aid measures after ingestion : Do not induce vomiting. If feeling unwell, immediately seek medical attention.

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

Symptoms/injuries : No specific effects and/or symptoms have been reported or are known.

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

See Heading 4.1.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. CO2. Foam. Powders.
Unsuitable extinguishing media : None.

5.2. Special hazards arising from the substance or mixture

Fire hazard : On exposure to high temperature, may decompose, releasing toxic gases.

5.3. Advice for firefighters

Protection during firefighting : Wear self-contained breathing apparatus, rubber boots and thick rubber gloves. Use water stream to cool containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : In the event that dust and/or fine particles are generated with this product, it is prudent to minimize prolonged inhalation exposure to these forms not to exceed the occupational exposure limit. Personal protective equipment (see section (s) :8.2).

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters.

PRAYPHOS ALMP

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : On land, sweep or shovel into suitable containers. Rinse with plenty of water.

6.4. Reference to other sections

See section 8 and 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not breathe dust. Avoid contact with skin, eyes and clothing. Always wash your hands immediately after handling this product, and once again before leaving the workplace. Remove contaminated clothing and shoes. Wash clothing before re-using. Packagings, even those that have been emptied, will retain product residue. Always obey safety warnings and handle empty packagings as if they were full.

Hygiene measures : When using do not eat, drink or smoke. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Remove contaminated clothing and shoes.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep packaging closed when not in use. Store in dry, cool, well-ventilated area. Store in original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Additional information : None TLV known.

8.2. Exposure controls

Appropriate engineering controls : Good ventilation of the workplace required.

Hand protection : Wear chemical protective gloves

Eye protection : Safety glasses with side shields

Skin and body protection : Protective clothing (with elasticated cuffs and closed neck)

Respiratory protection : Appropriate dust or mist respirator should be used if airborne particles are generated when handling this material (Type FFP2 in accordance with EN 140 or 149)

Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Colour : white.

Odour : odourless.

Odour threshold : Not applicable

pH : 3.5 - 4.5

Relative evaporation rate (butylacetate=1) : Not applicable

Melting point : No data available

Freezing point : No data available

Boiling point : No data available

Flash point : Not flammable

Auto-ignition temperature : Not flammable

Decomposition temperature : No data available

Flammability (solid, gas) : Not applicable

Vapour pressure : Not applicable

Relative vapour density at 20 °C : Not applicable

Relative density : No data available

Solubility : Insoluble. Insoluble in water and mineral acids at 20° C.

Log Pow : No data available

Viscosity, kinematic : No data available

Viscosity, dynamic : No data available

PRAYPHOS ALMP

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Explosive properties	: Product is not explosive.
Oxidising properties	: Non oxidizing material according to EC criteria.
Explosive limits	: Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions (Handling and storage).

10.2. Chemical stability

Stable under normal conditions (Handling and storage).

10.3. Possibility of hazardous reactions

No dangerous reactions known.

10.4. Conditions to avoid

Fire. Moisture.

10.5. Incompatible materials

None.

10.6. Hazardous decomposition products

see section(s) :5.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

PRAYPHOS ALMP (13776-88-0)	
LD50 oral rat	> 4640 mg/kg
LD50 dermal rabbit	> 4640 mg/kg

Skin corrosion/irritation : Not classified
pH: 3.5 - 4.5

Serious eye damage/irritation : Not classified
pH: 3.5 - 4.5

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

PRAYPHOS ALMP

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Dispose in a safe manner in accordance with local/national regulations.
Additional information	: Empty packaging can have residues or dusts and are subject to proper waste disposal, as above.
Ecology - waste materials	: Not applicable.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable
UN-No. (IATA)	: Not applicable
UN-No. (ADN)	: Not applicable
UN-No. (RID)	: Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: Not applicable
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IMDG

Transport hazard class(es) (IMDG)	: Not applicable
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IATA

Transport hazard class(es) (IATA)	: Not applicable
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ADN

Transport hazard class(es) (ADN)	: Not applicable
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RID

Transport hazard class(es) (RID)	: Not applicable
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14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

- Overland transport

No data available

- Transport by sea

No data available

- Air transport

No data available

PRAYPHOS ALMP

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

- Inland waterway transport

No data available

- Rail transport

No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

PRAYPHOS ALMP is not on the REACH Candidate List

PRAYPHOS ALMP is not on the REACH Annex XIV List

Other information, restriction and prohibition regulations : Not required.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No

SECTION 16: Other information

Indication of changes:

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830.

2	Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]	Removed	15/12/2015
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Training advice : None.

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. DISCLAIMER OF LIABILITY The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

SOLUPRAY™ A 1350 P

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Reference number: EUR-0255

Issue date: 10-11-11 Revision date: 16-11-23 Supersedes version of: 23-04-21 Version: 5.2

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

1.1. Product identifier

Product form : Mixture
Trade name : SOLUPRAY™ A 1350 P
UFI : W2U0-7SW3-D50J-3YY5
Product code : EUR-0255
Formula : Al (H₂PO₄)₃
Product group : Phosphate solution.

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Substance used as such, in formulation or in formulation of products for :
Intermediate
Laboratory chemicals
Plastic
Paint.
Resin
Protective coating
Oxidation inhibitor
Corrosion protection
Binding agent

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	+353 1 8379964	
Ireland	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA Belfast	0870 600 6266 (UK only),	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Cardiff Centre) University Hospital Llandough	Penlan Road CF64 2XX Llandough	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Edinburgh Centre) Royal Infirmary of Edinburgh	Little France Crescent EH16 4SA Edinburgh	0344 892 0111	Only for healthcare professionals

SOLUPRAY™ A 1350 P

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	+44 20 7188 7188	
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre	16/17 Framlington Place Newcastle-upon-Tyne NE2 4AB Newcastle	0344 892 0111	Only for healthcare professionals

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Serious eye damage/eye irritation, Category 1 H318

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP)

:



GHS05

Signal word (CLP)

: Danger

Contains

: Aluminium tris(dihydrogen phosphate)

Hazard statements (CLP)

: H318 - Causes serious eye damage.

Precautionary statements (CLP)

: P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER, a doctor.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
Aluminium tris(dihydrogen phosphate) (13530-50-2)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

Component	
Aluminium tris(dihydrogen phosphate)(13530-50-2)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SOLUPRAY™ A 1350 P

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Aluminium tris(dihydrogen phosphate)	CAS-No.: 13530-50-2 EC-No.: 236-875-2 REACH-no: 01-2119490078-32-0002	≥ 50	Eye Dam. 1, H318

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove victim to fresh air. If persistent breathing troubles, immediately seek medical attention.
First-aid measures after skin contact	: Immediately rinse with plenty of water. Remove contaminated clothing and shoes. If on skin, take off contaminated clothing.
First-aid measures after eye contact	: In case of eye contact, immediately rinse with clean water for 10-15 minutes. Consult an eye specialist.
First-aid measures after ingestion	: Rinse mouth thoroughly with water. Do not induce vomiting. If feeling unwell, immediately seek medical attention.

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

Symptoms/effects after inhalation	: May cause irritation to the respiratory tract and to other mucous membranes.
Symptoms/effects after skin contact	: Repeated or prolonged skin contact may cause irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: Ingestion unlikely. On ingestion in large quantities : Nausea. Vomiting. Diarrhea.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Carbon dioxide (CO ₂). Foam. Powders.
Unsuitable extinguishing media	: None.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Non flammable.
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5.3. Advice for firefighters

Protection during firefighting	: Tight protective clothing required. Wear self-contained breathing apparatus, rubber boots and thick rubber gloves. Do not dispose of fire-fighting water in the environment.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Personal protective equipment (see section (s) :8.2). Avoid breathing mist, vapours and spray. Avoid mist, vapours and spray production. Provide adequate ventilation to minimize dust and/or vapour concentrations.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Rinse with plenty of water. Move containers from spill area. Collect spills and put it into appropriated container.

6.4. Reference to other sections

See section 8 and 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin, eyes and clothing. After contact with skin, wash immediately and thoroughly with plenty of water. Remove contaminated clothing and shoes. Wash clothing before re-using. Avoid mist, vapours and spray production.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container closed when not in use. Store in a dry, cool and well-ventilated place. Keep only in the original container.

Incompatible materials : metals. Ordinary steel.

Packaging materials : Plastic.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

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8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. For preference use pumping techniques for unloading and discharging. Use as far as possible in a closed system. Where mist, vapours and spray may result. Local exhaust ventilation with captor/receptor hood.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or face shield with safety glasses according to EN 166.

8.2.2.2. Skin protection

Skin and body protection:

Total impervious protective suits, gloves, and boots must be worn

Hand protection:

Use gloves resistant to chemical products corresponding to EN 374:3". Take advice to gloves' manufacturer ". Polyvinyl alcohol or nitrile-butyl rubber gloves

8.2.2.3. Respiratory protection

Respiratory protection:

Use respiratory protection mask according to EN 140 or EN 405 with filter type P2 according to EN 143:2000 or FFP2 according to EN 149:2001

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Do not flush into surface water or sewer system.

Consumer exposure controls:

None TLV known.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless to light coloured.
Appearance	: Viscous liquid.
Odour	: odourless.
Odour threshold	: Not applicable - odourless
Melting point	: Not applicable - Liquid
Freezing point	: Not determined
Boiling point	: Technical impossibility to obtain the data
Flammability	: Not applicable
Explosive properties	: Product is not explosive.
Oxidising properties	: Non oxidizing.
Explosive limits	: Not available
Lower explosion limit	: Not applicable - Not explosive
Upper explosion limit	: Not applicable - Not explosive
Flash point	: Technical impossibility to obtain the data
Auto-ignition temperature	: Technical impossibility to obtain the data
Decomposition temperature	: Not applicable
pH	: 2,3 – 2,5 @ 1% Solution
Viscosity, kinematic	: Not available
Viscosity, dynamic	: Technical impossibility to obtain the data

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Solubility	: No data available.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Partition coefficient n-octanol/water (Log Pow)	: Not applicable
Vapour pressure	: No data available
Vapour pressure at 50 °C	: Not available
Density	: 1,46 – 4,48 g/cm ³
Relative density	: Not available
Relative vapour density at 20 °C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is stable at normal handling and storage conditions. On exposure to high temperature, may decompose, releasing corrosive gases.

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Contact with metals may release flammable hydrogen.

10.4. Conditions to avoid

None.

10.5. Incompatible materials

Ordinary steel. Bases. Nitrates. Chlorates. calcium carbide. Cyanides. sulphurs and sulphites.

10.6. Hazardous decomposition products

Above 300° C, releases corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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LD50 oral rat	No data available
LD50 dermal rabbit	No data available
LC50 Inhalation - Rat	No data available

Aluminium tris(dihydrogen phosphate) (13530-50-2)

LD50 oral rat	> 2000 mg/kg bodyweight OECD Guideline 420 ; EU Method B.1; J Bradshaw 2010
LD50 dermal rabbit	> 4640 mg/kg bodyweight Kamienski FX 1971

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Aluminium tris(dihydrogen phosphate) (13530-50-2)

LC50 Inhalation - Rat	> 5,1 mg/l OECD Guideline 403 ; according to EU Method B.2 ; according to EPA OPPTS 870.1300; Schuler D 2010
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 2,3 – 2,5 @ 1% Solution
Serious eye damage/irritation	: Causes serious eye damage. pH: 2,3 – 2,5 @ 1% Solution
Respiratory or skin sensitisation	: Not classified (Lack of data)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Lack of data)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified

Aluminium tris(dihydrogen phosphate) (13530-50-2)

NOAEL (subchronic, oral, animal/male, 90 days)	322,88 mg/kg bodyweight Dog - supporting substance (structural analogue or surrogate): sodium aluminium phosphate (15:3:8) - Mastalski K 1972
Aspiration hazard	: Not classified

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

11.2.2. Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Not classified

Aluminium tris(dihydrogen phosphate) (13530-50-2)

LC50 - Fish [1]	> 100 mg/l Oncorhynchus mykiss - OECD Guideline 203 ; according to EU Method C.1 - Tripotassium trihydrogen diphosphate dihydrate - Priestly SL & Mullee DM 2010
EC50 Daphnia 1	100 mg/l 66922-99-4 / 66922-99-4; Tripotassium trihydrogen diphosphate dihydrate. - Priestly SL & Mullee DM 2010
EC50 other aquatic organisms 1	> 1000 mg/l ACTIVATED SLUDGE- according to OECD Guideline 209 according to EU Method C.11; according to EPA OPPTS 850.6800 - N Clarke 2010
EC50 72h - Algae [1]	100 mg/l Desmodesmus subspicatus - EU Method C.3 - according to OECD Guideline 201 aluminium tris(dihydrogen phosphate).
ErC50 (algae)	No data available
NOEC chronic fish	4,7 mg/l aluminium sulphate / 10043-01-3 / 233-135-0 - Kimball, G. 1978
NOEC chronic crustacea	1,5 mg/l aluminium metaphosphate / 13776-88-0 / 237-415-3 - Simon, M. 2015
NOEC (additional information)	(3 Hours- 1000 mg/L, ACTIVATED SLUDGE, OECD 209)

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12.2. Persistence and degradability

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Persistence and degradability	No data available.
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Aluminium tris(dihydrogen phosphate) (13530-50-2)

Persistence and degradability	Not relevant.(inorganic substance).
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12.3. Bioaccumulative potential

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Partition coefficient n-octanol/water (Log Pow)	Not applicable
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Bioaccumulative potential	No data available.
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Aluminium tris(dihydrogen phosphate) (13530-50-2)

Partition coefficient n-octanol/water (Log Pow)	Technically not feasible
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Bioaccumulative potential	Low bioaccumulation potential.
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12.4. Mobility in soil

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Ecology - soil	No data available.
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Aluminium tris(dihydrogen phosphate) (13530-50-2)

Ecology - soil	No data available.
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12.5. Results of PBT and vPvB assessment

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This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties

: The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

12.7. Other adverse effects

Other adverse effects

: Phosphates are plant nutrient and as such may contribute to the growth of phytoplanktons in water.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods

: Comply with local regulations for disposal.

Additional information

: Empty packaging can have residues or dusts and are subject to proper waste disposal, as above.

Ecology - waste materials

: See the european waste catalogue.

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SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable
UN-No. (IATA)	: Not applicable
UN-No. (ADN)	: Not applicable
UN-No. (RID)	: Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

Overland transport

No data available

Transport by sea

No data available

Air transport

No data available

Inland waterway transport

No data available

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Rail transport

No data available

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no REACH substances with Annex XVII restrictions

REACH Annex XIV (Authorisation List)

Contains no REACH Annex XIV substances

REACH Candidate List (SVHC)

Contains no substance on the REACH candidate list

PIC Regulation (Prior Informed Consent)

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants)

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (1005/2009)

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on drug precursors)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

A chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Adverse health effects caused by endocrine disrupting properties	Added	
	Revision date	Modified	
	Supersedes	Modified	
12.6	Adverse effects on the environment caused by endocrine disrupting properties	Added	

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Abbreviations and acronyms:

ADN: European Agreement concerning international carriage of Dangerous goods by Inland waterways
ADR: European Agreement concerning international carriage of Dangerous goods by Road
AF : Assessment factor
BCF : Bioconcentration factor
Bw: Body weight
CAS: Chemical Abstracts Service
CLP : Classification, labelling, packaging
CSR: Chemical Safety Report
DMEL : Derived maximum effect level
DNEL: Derivative No effect Level
EC: European Community
ELV : Emission limit values
EN: European Norm
EUH: European Hazard Statement
EWC : European Waste catalogue
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
LC50: Median lethal concentration
LD50 : Median lethal dose
NOAEL : No-observed-adverse-effect-level
NOEC : No observed effect concentration
NOEL : No observed effect level
OEL : Operator exposure level
PBT: Persistent, bioaccumulative, Toxic
PEC : Predicted effect level
PNEC: Predicted No effect Concentration
REACH : Registration, evaluation and autorisation of chemicals
RID: Regulations concerning the international carriage of dangerous goods by rail
STEL: Short Term Exposure Limit
TWA : Time weighted average
vPvB: Very persistent, very bioaccumulative

Data sources : SDS.

Full text of H- and EUH-statements:

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H318	Causes serious eye damage.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Eye Dam. 1	H318	Calculation method
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Safety Data Sheet (SDS), EU

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