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MATERIAL SAFETY DATA SHEET Eraser A/P

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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Name Eraser A/P

Supplier: Control Solutions, Inc. 5903 Genoa-Red Bluff

Emergency Telephone No. - see 16: Other Information (last page)

Eraser A/P

Control Solutions, Inc. 5903 Genoa-Red Bluff

Pasadena, TX 77507-1041

2. COMPOSITION/INFORMATION ON INGREDIENTS

2.1.	ACTIVE INGREDIENT:	Glyphosate, in the form of its isopropylamine salt		
	Common Name	Glyphosate	Glyphosate, isopropylamine salt	
	CAS Name	Glycine,	Glycine, N-(phosphonomethyl),	
		N-(phosphonomethyl)-	Compd. with 2-propanamine (1:1)	
	ISO Name	Glyphosate	_	
	CAS No	1071-83-6	38641-94-0 254-056-8	
	EC No. (EINECS No.)	213-997-4		
	Molecular Weight	169.07	228.18	
	Empirical Formula	$C_3H_8NO_5P$	$C_6H_{17}N_2O_5P$	
	Structural Formula	HO P O	HO D	
		HO CH ₂ -NH-CH ₂ -COOH	HO CH ₂ -NH-CH ₂ -COO-+NH ₃ -CH(CH ₃) ₂	
2.2.	TYPICAL CONTENT:	Glyphosate, N-(phosphonomethyl)glycine*, as its isopropylamine salt		
	Active Ingredient			
	Inert Ingredients			
	Content of reportable ingredients			

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The surfactant has EU classification: Xn;R22 Xi;R36 N;R51/53: Harmful if swallowed. Irritating to eyes. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The product contains Tallow alkylamine ethoxylate (CAS No. 61791-26-2).

Material Use Herbicide
2.3. EU Classification of the Product ... None

use)

2.6. Classification – Canada Caution Irritant 2.7. Health: 1

7. Health: 1 Flammability: 0 Reactivity: 0

Personal Protection: See 8.1.

3. HAZARDS IDENTIFICATION

3.1. Health Hazards (Acute and Chronic):

Likely Routes of Exposure Skin contact and inhalation

Eye Contact The product may cause pain, redness and tearing as shown by

toxicity studies.

Skin Contact The product is only slightly toxic and only slightly irritating as

shown by toxicity studies.

Ingestion The product is only slightly toxic as shown by toxicity studies. No

significant adverse health effects are expected to develop if only small amounts (less than a mouthful) are swallowed. Ingestion of similar formulations has been reported to produce gastrointestinal discomfort with irritation of the mouth, nausea, vomiting and diarrhea. Oral ingestion of large quantities of one similar product

has been reported to result in hypotension and lung edema.

Inhalation The product is only slightly toxic if inhaled as shown by toxicity

studies.

3.2. Signs and Symptoms of Exposure

See 3.1.

3.3. Environmental Hazards See 12.

4. FIRST AID MEASURES

4.1. Emergency and First Aid Procedures:

If in Eyes Immediately hold eyelids open and flush with plenty of water. Get

medical attention.

dilute by swallowing water or milk. Get medical

attention.

If Inhaled Remove individual to fresh air. If not breathing, give artificial

respiration, preferably mouth-to-mouth. Get medical attention.

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5. FIRE-FIGHTING MEASURES

5.1. Extinguishing Media and Procedure

Water spray, foam, dry chemical, carbon dioxide or any class B extinguishing agent.

Use water spray to keep fire-exposed containers cool. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Fight fire from protected location or maximum possible distance. Avoid heavy hose streams. Dike area to prevent water runoff. Firemen should wear self-contained breathing apparatus and protective clothing.

5.2. Hazardous Decomposition or Byproducts in a Fire

The essential breakdown products are carbon monoxide, carbon dioxide, phosphorus pentoxide and nitrogen oxides.

5.3. Unusual Fire and Explosion Hazards

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal Protection Observe all protection and safety precautions when cleaning up spills, see 8.

None.

6.2. Steps to Be Taken in Case of Spill

Small liquid spills on the floor or other impervious surface, should be soaked up with towels or other absorbent material and discarded in the trash. Clean the spill area with soap and water and rinse the area thoroughly.

Large liquid spills on the floor or other impervious surface should be contained or diked and then absorbed with attapulgite, bentonite or other absorbent clays. Collect the contaminated absorbent, place in a metal drum and dispose of in accordance with the instructions provided under Disposal (see 13). Thoroughly scrub floor or other impervious surface with a strong industrial detergent and rinse with water.

Large spills that soak into the ground should be dug up, placed in metal drums and disposed of in accordance with instructions provided under Disposal (see 13). Contact appropriate state agency when considering a land spreading disposal option.

Leaking containers should be separated from non-leakers and either the container or its contents transferred to a drum or other nonleaking container and disposed of in accordance with instructions provided under Disposal (see 13). Any recovered spill liquid should be similarly collected and disposed of.

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7. HANDLING AND STORAGE

7.1 Precautions to Be Taken in Handling

Do not get in eyes or breathe mist or get in or on clothing. Avoid breathing vapor or spray mist. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing (see 8, Personal Protection).

Spray solutions of the product should be mixed, stored or applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined containers

Do not mix, store or apply this product or spray solutions of this product in galvanized or unlined steel (except stainless steel) containers or spray tanks.

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark.

Do not contaminate water when disposing of equipment washwaters.

7.2. Precautions to Be Taken in Storing

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

using tobacco, or using the toilet. Wash thoroughly with soap and

7.3. Fire and Explosion Precautions

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Respiratory Protection The undiluted product is not likely to present an airborne exposure concern during normal handling. In the event of an accidental discharge of the material during manufacture or handling which produces a heavy vapor or mist, workers should put on respiratory protection equipment in conformity with local regulations. For application of product diluted in accordance with label instructions: Respirators are not required for applications of use-dilutions of the product. Protective gloves Wear heavy duty, natural rubber gloves. Eye Protection Wear goggles, face shield or safety glasses. Skin Protection Wear appropriate protective clothing to prevent skin contact. Applicators and other handlers must wear long-sleeved shirt, long pants, shoes plus socks and protective eyewear. 8.2. Work/Hygienic Practices Do not get in eyes or get in or on clothing. Avoid breathing vapor or spray mist. Wash hands before eating, drinking, chewing gum,

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water after handling. Remove contaminated clothing immediately and wash before reuse. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1.	Physical State	Clear, viscous solution
9.2.	Color	Amber-colored
9.3.	Odor	Practically odorless to slight amine-like odor
9.4.	Melting Point	Below 0°C
9.5.	Boiling Point	113°C
9.6.	Specific Gravity	1.16 g/cm ³ at 20°C
9.7.	Vapor Pressure	For the active ingredient glyphosate (acid): 1.75 x 10 ⁻⁷ mm Hg
		$(1.31 \times 10^{-5} \text{ Pa}) \text{ at } 25^{\circ}\text{C}$
9.8.	Viscosity	43 cS at 20°C, 18 cS at 40°C (kinematic viscosity)
9.9.	Solubility in Water	The product is fully miscible with water (solubility active ingredient
		glyphosate (acid): 10.5 g/l at 20°C).
9.10.	Partition Coefficient n-Octanol/Water	$P = 4.5 \times 10^{-4}$; Log $P = -3.4$ (active ingredient glyphosate (acid))
9.11.	pH	4.5 (1% solution in water) at 20°C
9.12.	Flash Point	Above 113°C
9.13.	Autoignition Temperature	N.a.
9.14.	Flammable Limits	N.a.
10.	STABILITY AND REACTIVITY	
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10.1. Chemical Stability The product is stable at ambient temperature.

10.2. Hazardous Decomposition or

Byproducts None (however, see 5.2.).

10.3. Materials to Avoid

Do not mix, store or apply this product or spray solutions of this product in galvanized or unlined steel (except stainless steel) containers or spray tanks.

This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture with air. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welders torch, lighted cigarettes or other ignition source.

Hazardous Polymerization

Does not occur. This product can react with caustic (basic) materials to liberate heat. This is not a polymerization but rather a chemical neutralization in an acid-base reaction.

11. TOXICOLOGICAL INFORMATION

11.1. Health Hazards See 3.

11.2. Toxicological Data:

> Ingestion (oral) Practically non-toxic (LD₅₀, rat: > 5000 mg/kg) Practically non-toxic (LD₅₀, rabbit: > 2000 mg/kg) Skin (dermal)

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Inhalation LC₅₀, rat: > 4.86 mg/l/4 h

Eye Irritation May cause substantial but temporary eye injury

Skin Irritation Practically not irritant to rabbit skin

Kligmann Maximization test

Carcinogenicity EPA has classified glyphosate in category E (evidence of non-

carcinogenicity for humans).

12. ECOLOGICAL INFORMATION

The active ingredient (glyphosate (acid)) is rapidly deactivated by adsorption to clay particles.

The acute toxicity of the product is:

- Fish Rainbow Trout 96-hr LC₅₀ 18.6 mg/l (static)

Bluegill Sunfish 96-hr LC₅₀ 11.9 mg/l (static)

- Invertebrates Daphnia magna 48-hr EC₅₀ 21.6 mg/l

- Birds Bobwhite quail and mallard duck LD₅₀ > 2000 mg/kg (glyphosate (acid))

13. DISPOSAL CONSIDERATIONS

Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable federal, state or local procedures.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned or destroyed. **DO NOT CUT OR WELD ON OR NEAR THIS CONTAINER.**

dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. However, procedures in accordance with state and local regulations

must be observed.

14. TRANSPORT INFORMATION

UN CLASSIFICATION: Not classified as hazardous material for transport.

15. REGULATORY INFORMATION

15.1. **IN THE EU:**

Classification and Labeling

(according to 88/379/EEC as amended): None

15.2. Threshold Limit Value OSHA PEL ACGIH TLV MAK HGV Others (USA) (USA) (Germany) (Denmark)

n.a. n.a. n.a. n.a. –

However, threshold limit values defined by local regulations must be observed.

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16. OTHER INFORMATION

Emergencies in the US (spills): CHEMTREC toll free 1-800-424-9300 Emergencies in the US (medical): SafetyCall International 1-(866) 897-8050

Telephone Number for Information in the US (281) 892-2500 (8:00 am - 5:00 pm, Mon.-Fri.)

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