

SAFETY DATA SHEET



Product Name: TUMBLEWEED PRO **Reference No:** 321

Version No.: 1 **Revision Date:** N/A **Date of Introduction:** September 2002

1. IDENTIFICATION OF SUBSTANCE / PREPARATION AND COMPANY

Product Name TUMBLEWEED PRO
Common name of active ingredient Isopropylamine salt of N-(phosphonomethyl)glycine
{Isopropylamine salt of glyphosate}
Intended use For use only as a horticultural, industrial, forestry or aquatic herbicide.
Company Identification **Scotts UK Professional**
Paper Mill Lane
Bramford
Ipswich **Telephone +44 (0) 1473 830492**
Suffolk, IP8 4BZ
Emergency Telephone **01865 407333 (24hr)**

2. COMPOSITION / INFORMATION ON INGREDIENTS

JBA No: 019203
NPK: Not applicable

Chemical Characterisation

<u>Chemical name</u>	<u>CAS-No</u>	<u>EINECS/ELINCS</u>	<u>Classification</u>	<u>Concentration</u>
Isopropylamine salt of glyphosate	38641-94-0	254-056-8	-	54%
Ethoxylated tallowamine surfactant	61791-26-2	-	Xn, R22, R41, R43	5%
Water	7732-18-5	231-791-2	-	41%

3. HAZARDS IDENTIFICATION

Physicochemical: NOT CLASSIFIED

Health:

Potential health effects Likely routes of exposure: skin contact, eye contact.

Ingestion May cause gastrointestinal tract irritation, (discomfort, nausea, vomiting, diarrhoea)

Eye contact, short term Not expected to produce significant adverse effects when recommended use instructions are followed.

Skin contact, short term Not expected to produce significant adverse effects when recommended use instructions are followed.

Inhalation, short term Not expected to produce significant adverse effects when recommended use instructions are followed.

Environmental: Not expected to produce significant adverse effects when recommended use instructions are followed.
Refer to section 11 for toxicological and section 12 for environmental information.
Harmful to fish or other aquatic life. Do not contaminate surface waters or ditches with chemical or used container.

4. FIRST AID MEASURES

General information This product is not an inhibitor of cholinesterase.
Treatment with atropine and oximes is not indicated.

Inhalation Remove patient to fresh air.

Skin contact Take off contaminated clothing, wristwatch, jewellery. Wash affected skin with plenty of water.
Wash clothes before re-use.

Eye contact Immediately flush with plenty of water. If there are persistent symptoms, obtain medical advice.

Ingestion Immediately offer water to drink. Do NOT induce vomiting unless directed by medical personnel.
If symptoms occur, get medical attention.

5. FIRE FIGHTING MEASURES

Flash point	Does not flash
Extinguishing media	Water fog, foam, dry chemical, carbon dioxide (CO ₂)
Extinguishing media to avoid	Strong water jet
Unusual fire and explosion hazards	Minimise use of water to prevent environmental contamination. Environmental precautions: see section 6.
Hazardous products of combustion	Carbon monoxide (CO), phosphorus oxides (PxOy), nitrogen oxides (NOx)
Protective equipment	Suitable protecting clothing and self-contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Use personal protection recommended in section 8.
Environmental precautions	Small quantities: Low environmental hazard. Large quantities: Minimise spread. Keep out of drains, sewers, ditches and waterways.
Methods for cleaning up	Small quantities: Flush spill area with water. Large quantities: Absorb in earth, sand or absorbent materials.. Dig up heavily contaminated soil. Collect in containers for disposal. Refer to section 7 for types of containers. Flush residues with small quantities of water. Minimise use of water to prevent environmental contamination. Refer to section 13 for disposal of spilled material.

7. HANDLING & STORAGE

Handling	Good industrial practice in housekeeping and personal hygiene should be followed. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Wash hands thoroughly after handling or contact. Thoroughly clean equipment after use. Do not contaminate drains, sewers and waterways when disposing of equipment rinse water. Emptied containers retain vapour and product residue. Observe all labelled safeguards until container is cleaned, reconditioned or destroyed.
Storage conditions	Temperature (minimum – maximum): >-15°C - <50°C Compatible material for storage: Stainless steel, aluminium, fibreglass, plastic, glass lining. Incompatible materials for storage: Galvanised steel, unlined mild steel, see also section 10. Keep out of reach of children. Keep away from food, drink and animal feed. Keep only in the original container. Partial crystallisation may occur on prolonged storage below the minimum storage temperature. If frozen, place in warm room and shake frequently to put back into solution.
Minimum shelf life	5 years.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Airborne exposure limits	Components	Exposure guidelines
	Isopropylamine salt of glyphosate	No specific occupational exposure limit has been established
	Surfactant	No specific occupational exposure limit has been established
	Water	No specific occupational exposure limit has been established
Engineering controls	No special requirement when used as recommended	
Eye protection	If there is significant potential for contact wear chemical goggles.	
Skin protection	If repeated or prolonged contact wear chemical resistant gloves.	
Respiratory protection	No special requirement when used as recommended. When recommended, consult manufacturer of personal protective equipment for the appropriate type of equipment for a given application.	

9. PHYSICAL & CHEMICAL PROPERTIES

These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

Physical form	Liquid
Colour	Yellow – amber
Odour	Slight, amines.
pH	4.4 – 4.9 @50g/l
Boiling pt / range	Not determined
Flash point	Does not flash
Specific gravity	1.199@20°C / 4°C
Water solubility	Completely miscible
Partition coefficient (log Pow)	<0.000 (active ingredient)

10. STABILITY & REACTIVITY

Stability	Stable under normal conditions of handling and storage.
Hazardous decomposition products	Hazardous products of combustion: Carbon monoxide (CO), phosphorus oxides (P _x O _y), nitrogen oxides (Nox)
Material to avoid / reactivity.	Reacts with galvanised steel or unlined mild steel to product hydrogen, a highly flammable gas that could explode.

11. TOXICOLOGICAL INFORMATION

This section is intended for use by toxicologists and other health professionals. Data on product, similar products and on components are summarised below.

Acute oral toxicity	Rat LD ₅₀ (limit test): >5,000 mg/kg body weight. No mortality
Acute dermal toxicity	Rabbit LD ₅₀ (limit test): >5,000mg/kg body weight. No mortality
Skin irritation	Rabbit, 6 animals, OECD 404 test. Redness, mean EU score: 0.33 Swelling, mean EU score: 0.00 Days to heal: 3
Eye irritation	Rabbit, 6 animals, OECD 405 test. Conjunctival redness, mean EU score: 1.78 Conjunctival swelling, mean EU score: 1.17 Corneal opacity, mean EU score: 0.00 Iris lesions, mean EU score: 0.00 Days to heal: 7 Slightly irritating to eyes but not sufficient for classification.
<u>Similar formulation</u>	
Acute inhalation toxicity	Rat LC ₅₀ (limit test), 4 hours, aerosol (3 fold dilution): >5.7mg/L Aerosol particle size (<10 micron) much lower than the droplet size (>100 micron) normally achieved during spraying operations. Maximum attainable concentration. No mortality.
Skin sensitisation	Guinea pig, 9-induction Buehler test: positive incidence: 0%.
<u>Experience with human exposure</u>	
Ingestion, excessive, intentional misuse	Respiratory effects: pneumonitis (aspiration) Gastro-intestinal effects: nausea/vomiting, diarrhoea, abdominal pain, bloody vomiting (haematemesis)
Cardiovascular effects	Abnormal heart rhythm (cardiac dysrhythmia), decreased heart output (myocardial depression)
General/systemic effects	Disturbances of fluid and electrolyte regulation, abnormally decreased blood volume (hypovolaemia), elevated serum amylase, fluid loss (haemoconcentration), no cholinesterase inhibition.

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Laboratory effect – blood chemistry Elevated serum transaminases, mild acidosis.

Eye contact, short term, epidemiological Note: No cases of irreversible eye effects could be attributed to glyphosate formulation in an extensive epidemiological survey of reported accidental eye contact with these formulations.

N-phosphonomethyl glycine (glyphosate)

Mutagenicity In vitro and in vivo mutagenicity test(s): not mutagenic

Repeated dose toxicity Rabbit, dermal, 21 days:
NOAEL toxicity: >5,000mg/kg diet.
Target organs / systems: None
Other effects: None

Rat, oral, 3 months:
NOAEL toxicity: >20,000mg/kg diet
Target organs / systems: None
Other effects: None

Carcinogenicity Mouse, oral, 24 months:
NOEL tumour: >30,000mg/kg diet
NOAEL toxicity: ~5,000mg/kg diet
Tumours: None.
Target organs / systems: liver
Other effects: decrease of body weight gain, histopathologic effects.

Rat, oral, 24 months:
NOEL tumour: >20,000mg/kg diet
NOAEL toxicity: ~8,000mg/kg diet
Tumours: None
Target organs / systems: eyes
Other effects: decrease of body weight gain, histopathologic effects.

Toxicity to reproduction/fertility Rat, oral, 3 generations:
NOAEL toxicity: >30mg/kg body weight
NOAEL reproduction: >30mg/kg body weight
Target organs/systems in parents: None
Other effects in parents: None
Target organs / systems in pups: None
Other effects in pups: None

Developmental toxicity / teratogenicity Rat, oral, 6-19 days of gestation:
NOAEL toxicity: 1,000mg/kg body weight
NOAEL development: 1,000mg/kg body weight
Other effects in mother animal: decrease of body weight gain, decrease of survival.
Developmental effects: weight loss, post-implantation loss, delayed ossification.
Effects on offspring only observed with maternal toxicity.

Rabbit, oral, 6-27 days of gestation:
NOAEL toxicity: 175mg/kg body weight
NOAEL development: 175mg/kg body weight.
Target organs/systems in mother animal: none
Other effects in mother animal: decrease of survival
Developmental effects: None

12. ECOLOGICAL INFORMATION

This section is intended for use by ecotoxicologists and other environmental specialists.
Data on product, similar products and on components are summarised below.

Aquatic toxicity, fish	Rainbow trout (<i>Oncorhynchus mykiss</i>) Bluegill sunfish (<i>Lepomis macrochirus</i>)	Acute toxicity, 96 hours, static, LC ₅₀ : >100mg/L Acute toxicity, 96 hours, static, LC ₅₀ : >40mg/L
Aquatic toxicity, invertebrates	Water fleas (<i>Daphnia magna</i>)	Acute toxicity, 48 hours, static, LC ₅₀ : 100mg/L
Similar formulation		
Aquatic toxicity, fish	Bluegill sunfish (<i>Lepomis macrochirus</i>) Rainbow trout (<i>Oncorhynchus mykiss</i>)	Acute toxicity, 96 hours, flowthrough, LC ₅₀ : 5.8mg/L Acute toxicity, 96 hours, flowthrough, LC ₅₀ : 8.2mg/L
Aquatic toxicity, invertebrates	Water fleas (<i>Daphnia magna</i>)	Acute toxicity, 48 hours, static, EC ₅₀ : 12.9mg/L
Aquatic toxicity, algae, aquatic plants	Green algae (<i>Selenastrum capricornutum</i>)	Acute toxicity, 72 hours. Static EbC ₅₀ (biomass): 2.1mg/L
Avian toxicity	Bobwhite quail (<i>Colinus virginianus</i>) Mallard duck (<i>Anas platyrhynchos</i>)	Dietary toxicity, 5 days, LC ₅₀ : >5,620mg/kg diet Dietary toxicity, 5 days, LC ₅₀ : >5,620mg/kg diet
Arthropod toxicity	Honey bee (<i>Apis mellifera</i>)	Oral/contact, 48 hours, LD ₅₀ : > 100µg/bee
<u>N-(phosphonomethyl)glycine (glyphosate)</u>		
Bioaccumulation	Bluegill sunfish (<i>Lepomis macrochirus</i>)	Whole fish: BCF: <1 No significant bioaccumulation is expected.
Dissipation	Soil, field Water, aerobic	Half life: >2 – 174 days Koc: 884 – 60,000 L/kg days Binds strongly to soil. Half life: > 7 days
<u>Surfactant</u>		
Biodegradation	Zahn-Wellens test	Degradation: 80% within 28 days Inherently biodegradable

13. DISPOSAL CONSIDERATIONS

Product	Recycle if appropriate facilities/equipment available. Burn in special, controlled high temperature incinerator. Dispose of as hazardous industrial waste. Keep out of drains, sewers, ditches and waterways. Follow all local/regional/national regulations.
Container	Triple rinse empty containers. Pour rinse water into spray tank. Store for collection by approved waste disposal service. Dispose of as non-hazardous industrial waste. Do NOT re-use containers. Follow all local/regional/national regulations.

14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

Not regulated for transportation.

15. REGULATORY INFORMATION

Classification & labelling NOT CLASSIFIED

This Safety Data Sheet does not form part of the label approved under the Control of Pesticide Regulations 1986.

Following the instructions on the pesticide product label for the specified uses should ensure that the product is used safely and efficaciously for those uses.

Current registration no. MAPP 11083

Risk phrases NOT APPLICABLE.

Safety phrases / precautions (from the label)

WEAR SUITABLE PROTECTIVE GLOVES when handling or applying the concentrate.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES, RUBBER BOOTS, FACE PROTECTION (FACESHIELD) AND SUITABLE RESPIRATORY EQUIPMENT (disposable filtering facepiece respirator) when making drift application or using mist blower equipment.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE GLOVES AND RUBBER BOOTS when using hand-held rotary atomisers and weedwiper equipment.

WASH ALL PROTECTIVE CLOTHING thoroughly after use, especially the insides of gloves.

WASH CONCENTRATE from skin of eyes immediately.

WASH HANDS AND EXPOSED SKIN before meals and after work.

HARMFUL TO FISH OR OTHER AQUATIC LIFE. Do not contaminate surface waters or ditches with chemical or used container.

KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.

WASH OUT CONTAINER THOROUGHLY, empty washing into spray tanks and dispose of safely.

16. OTHER INFORMATION

Further information

The Control of Substances Hazardous to Health Regulations (COSHH) may be applicable to the use of this product.

Risk phrases referred to in section 2 for composite ingredients.

R22: Harmful if swallowed.

R41: Risk of serious damage to eyes.

R43: May cause sensitisation by skin contact.

For further advice authorised persons (e.g. doctor) may contact the National Poisons Information Service Centre:

UK National number: 0870 600 6266

Eire (Dublin) 00 3531 8379964 or 00 3531 8379966

Sources of data

EH40/2002 and other suppliers' safety data sheets

Date of issue

September 2002

The information on this sheet is not a specification and it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage and use of the product.

It is not applicable to unusual or non standard uses of the product nor where instructions or recommendations are not followed.