



USE DIRECTION
SEPTEMBER 2023

EASY ATS

Ammonium Thiosulphate (ATS) solution

Soil-applied liquid sulphur fertiliser

%N	%P	%K	%S
16	0	0	34

WARNING

Harmful if inhaled.

Classified as Hazardous according to Safe Work Australia criteria.

SAFETY DIRECTIONS / FIRST AID

DO NOT swallow. Avoid ingestion and the inhalation of spray or mist. Avoid contact with eyes or skin. Wash hands after use.

If inhaled, remove to fresh air, and keep at rest in a position comfortable for breathing. Call the Poisons Information Centre (131 126), or a doctor, if you feel unwell.

ANALYSIS (WEIGHT/VOLUME)

Nutrients

- Nitrogen (N) w/v as ammonium (160 g/L N) 16%
- Sulphur (S) w/v as thiosulphate (S_2O_3) (340 g/L S) 34%

Impurities

- Cadmium (Cd) 1 mg/kg Cd (max)
- Lead (Pb) 1 mg/kg Pb (max)
- Mercury (Hg) 0.2 mg/kg Hg (max)

@Nutrient Advantage, Granulock, Gran-Am, Big N, Easy N, Green Urea NV, enPower, Sitaldel, Trigger, SuPerfect, Boosta, Cal-Am and Cal-Gran are registered trademarks of Incitec Pivot Limited. Incitec Pivot Fertilisers is a business of Incitec Pivot Limited, ABN 42 004 080 264. @Fertcare is a registered trademark of Australian Fertiliser Services Association, Inc.

This is a guide only, which we hope you find useful as a general tool. While Incitec Pivot Fertilisers has taken all reasonable care in the preparation of this guide, it should not be relied on as a substitute for tailored professional advice and Incitec Pivot Fertilisers accepts no liability in connection with this guide.

Specific Gravity

EASY ATS has a specific gravity at 20°C of 1.325. This gives EASY ATS an analysis on a weight/weight basis of:

- Nitrogen (N) w/w (120 g/kg N) 12%
- Sulphur (S) w/w (257 g/kg S) 25.7%

EASY ATS

EASY ATS is a clear colourless solution of ammonium thiosulphate (ATS), which has the chemical formula of $(\text{NH}_4)_2\text{S}_2\text{O}_3$. It has a pH of 8.5 – 9.5. At 34 % w/v S, EASY ATS contains a higher concentration of sulphur (S) than can be obtained by dissolving soluble solid fertilisers in water. It also supplies nitrogen (16 % w/v N), but in smaller amounts than sulphur.

On application to the soil, ammonium thiosulphate decomposes to form sulphate and elemental sulphur, equal amounts of each. Plants absorb sulphur as sulphate, so this part is immediately available for root uptake. The elemental sulphur has a fine particle size and becomes available once it is oxidised by soil bacteria to the sulphate form. This gives a slow-release effect over several weeks, depending on prevailing soil and weather conditions.

EASY ATS can be applied or injected into the soil in a variety of ways, provided it is not placed in direct contact with crop seeds or the roots of transplants, as it will burn the roots. In fertigation programs, EASY ATS can be applied on its own or mixed with EASY N to provide nitrogen and sulphur in the desired amounts. Plants absorb up about ten times more nitrogen than sulphur.

EASY ATS is toxic to foliage and crop roots. It should not be used in foliar sprays, applied in direct contact with crop seeds or the roots of transplants, or be used in hydroponic solutions. Accidental foliar burn, e.g., from drift, is most likely to occur when the temperature is high and/or humidity is low.

Pre-plant application in Annual Crops ✓

Spray onto the soil surface or inject behind tines into the soil. If applied into prepared beds in row crops close to planting time, apply deeper into the soil than the intended depth of seeding, or off-set to the side of the intended position of the row.

Planting ✓

Apply between the rows, or behind non-seeding tines. If applied behind seeding tines, ensure the fertiliser does not contact the seed or planting material, e.g., band 5 cm to the side of and 5 cm below the seed or transplants in row crops.

Top-dressing ✕

Top-dressing pasture and crops planted at narrow row spacings with EASY ATS is **NOT** recommended as spray left on the foliage may burn the leaves.

Side-dressing ✓

In row crops, apply the fertiliser to the side of the rows, either to the soil surface or place into the soil. Avoid leaf wetting. If injected into the soil, apply far enough to the side of the rows to avoid root

pruning and fertiliser burn to the crop roots. Avoid application in the centre of the inter-row space where utilisation of fertiliser will tend to be poor given the distance the plants roots have to grow to reach it. In addition, the soil is more likely to be compacted and waterlogging is more likely to occur in this area.

Trees and Vines ✓

Inject into the soil or direct the spray at the soil. Apply in a broad band under the edge of the canopy or along the hedgerow (as for other soil-applied fertilisers). Avoid spray drift onto the foliage or bark.

NOTE: EASY ATS may also be applied through the irrigation water, e.g., under-tree sprinklers or drip/trickle irrigation systems.

Turf ✗ ✓

EASY ATS should be applied to turf through the irrigation water. This dilutes the fertiliser and washes most of it from the leaves. If applied by boom, it may burn the grass.

Fertigation ✓

The use of Liquids such as EASY ATS allows fertiliser solutions to be injected directly into irrigation lines without prior mixing in water. This avoids the need for bag handling and dissolving solid fertilisers on farm.

EASY ATS can be applied through all types of irrigation systems, including overhead sprinklers. With fixed line overhead sprinkler systems, inject the fertiliser into the fertiliser lines over a reasonable period, e.g., mid third of the shift, leaving the last third to flush the lines and wash any fertiliser solution from the leaves.

With travelling irrigators, this will not be possible, but given the dilution that occurs when the EASY ATS fertiliser solution is being injected continuously, foliar burn is unlikely to occur.

Hydroponics ✗

EASY ATS is not recommended for hydroponic solutions. It may burn plant roots, and not all the sulphur is in the immediately available sulphate form.

Foliar Fertilisation ✗

Do not apply EASY ATS by mister or boom-spray, as the fertiliser solution will burn the plant foliage.

APPLICATION RATES AND TIMING

Application rates will be dictated by the sulphur requirements of the crop or pasture.

Cereal grain crops may require no more than 15 – 45 L/ha (5 – 15 kg/ha S), legume grain crops 30 – 60 L/ha (10 – 20 kg/ha S), and canola 60 – 90 L/ha (20 – 30 kg/ha S) per annum (crop).

Typical application rates in horticulture and sugarcane are 60 – 75 L/ha (20 – 25 kg/ha S).

Where liquid fertilisers such as EASY ATS are applied in horticultural crops, it is customary to split the seasonal fertiliser needs into several smaller applications, e.g., three or four applications at 20 L/ha applied through the irrigation water.

Usually, other nutrients, e.g., nitrogen will need to be applied simultaneously with sulphur. As plants absorb much greater amounts of nitrogen than they do sulphur, EASY ATS can be mixed with EASY N (UAN solution) to give the desired N:S ratio, e.g., to achieve a N:S ratio of 10:1, mix one litre of EASY ATS with 7.6 litres of EASY N.

COMPATIBILITY

With other fertilisers

EASY ATS is compatible with many slightly acidic to alkaline liquid fertilisers but should not be mixed with acidic fertilisers. The pH of the final solution should be maintained above 6.0 to prevent elemental sulphur dropping out of the solution as a yellow precipitate.

EASY ATS is compatible with:

- **EASY N, EASY NP, and EASY PK.**
- **EASY KS** (potassium thiosulphate solution) although it is unlikely there will be a need to mix the two products or use both in other mixtures.

EASY ATS is **incompatible** with **EASY Cal** and the two products should not be mixed.

With crop protectants

EASY ATS is compatible with various knockdown and soil-applied residual herbicides. Before application, however, the label of the crop protection product should be checked for specific advice, and the products should only be mixed if it is safe to do so.

EASY ATS should **not** be applied with selective post-emergent herbicides, insecticides, or fungicides as the EASY ATS itself is toxic to foliage.

DELIVERY

EASY ATS is available for internal use at IPF and is currently not sold through agents or dealers.

STORAGE

Store in a cool place, away from direct sunlight. Keep containers closed to minimise evolution of ammonia from the fertiliser solution.

CORROSIVITY AND CARE OF EQUIPMENT

Fertilisers can be corrosive to metals. Flush application and fertigation equipment after use.

Where applied through fixed irrigation lines, discontinue use towards the end of the shift, to flush fertiliser from the lines and off crop foliage. This minimises corrosion and the risk of leaf burn.



As EASY ATS is likely to be used in combination with EASY N (UAN solution), or if it isn't at present, may be in the future, it is recommended that equipment used on farm to store, distribute, and apply EASY ATS be of a similar standard to that used for EASY N.

FURTHER READING

Refer to the EASY N Use Directions for further details.

Agritopics on “Sulphur” and “Fertigation” are available if required and should be read in conjunction with these “Use Directions”.

SAFETY DIRECTIONS

Refer to the Safety Data Sheet (SDS) for more detailed safety advice. Before use, read the Product Label and the SDS. Use safe work practices and avoid contact with the eyes and skin. Avoid ingestion and inhaling dust. Protective clothing, eyewear and dust masks should always be used when dealing with this product. Observe good personal hygiene, including washing hands after use. Avoid loss of fertiliser to waterways.

WARNING

This document contains information of a general nature. Before using fertiliser seek independent agronomic advice. Fertiliser programs may need to be varied depending on the plants being grown, climatic and soil conditions, application methods, irrigation, agricultural and livestock management practices, the soil's fertility, and cultural practices. ('Unforeseen Elements')

Fertiliser may burn and/or damage crop roots or foliage. Foliar burn to the leaves, fruit or other plant parts is most likely to occur when fertilisers are foliar applied at high concentrations and/or on a regular basis, different products are mixed and sprayed together at cumulatively high rates, the water is of poor quality, or the spray is applied under hot dry conditions, e.g. in the heat of the day.

Fertiliser and supplements may affect animal health. Seek independent advice before using any supplements in livestock rations.

DISCLAIMER

As Unforeseen Elements are beyond the control of Incitec Pivot Limited, in no event Incitec Pivot Limited and its related bodies corporate be liable or accept any responsibility whatsoever for any direct, indirect, punitive, incidental, special or consequential damages (including but not limited to loss of revenue, crops and livestock), in respect of the illness, injury or death of a person, damage to property (including of a third party), or any other loss whatsoever arising out of or connected with the use or misuse of this fertiliser, or its transport, storage, handling or application. Where Incitec Pivot Limited and its related bodies corporate's liability cannot be lawfully excused, it and its related bodies corporate's liability shall be limited to the replacement of, or cost of the fertiliser supplied. The buyer accepts and uses this product subject to these conditions.

COPYRIGHT

Copying or reproduction in whole, or in part, by any means, or transmission, or translation into a machine language without the written permission of Incitec Pivot Limited, is strictly prohibited.