



Tiger 90CR®

Sulphur (S) Swael 900 g/kg

**FERTILIZER GROUP 2
MISSTOF GROEP 2**

Reg. No. B4863, Act No. 36 of 1947
Reg. Nr. B4863, Wet Nr. 36 van 1947
Botswana Reg. No./Nr. W 130768
Namibian Reg. No. / Namibiese Reg. Nr. N-F1417

Mass/Massa:
**1 Metric Ton
25 kg**

**BATCH NO / LOTNOMMER:
DATE OF MANUFACTURE / DATUM VAN VERVAARDIGING:**



Registration Holder / Registrasiehouer:

Nulandis® (A division of AECI Limited)/ ('n Afdeling van AECI Beperk)

Reg. No./Nr. 1924/002590/06

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UN No./VN Nr. Not regulated / nie gereguleer nie

Product Description:

Tiger 90CR is a high analysis granular degradable sulphur product that can be used both as a source of plant nutrient sulphur and / or as a soil amendment for correction of problem alkali soils. Yearly applications of **Tiger 90CR** will improve soil sulphur levels as well as losses associated with water soluble nutrients. **Tiger 90CR** is a unique, sulphur fertilizer that delivers agronomically and economically, and provides excellent handling characteristics.

Application and Usage:

Tiger 90CR, when used as a part of a balanced fertilizer program, can provide a season-long source of sulphur. **Tiger 90CR** can be applied alone or blended with granular fertilizers. The amount required should be based on agronomic recommendations from soil tests. Recommendations should also be based on crop removal rates of sulphur. Higher applications of **Tiger 90CR** will acidify high pH and alkaline soils, as well as assisting with leaching sodium from the soil due to the formation of sulphuric acid. During this process nutrients such as phosphates are made more available for plant-uptake through the roots.

General:

The following factors are required for the elemental sulphur to convert to plant available sulphate.

1. **Microbial activity** – *Thiobacillus* bacteria is required to assist with the oxidation of the **Tiger 90CR** product. Once oxidised, the sulphur is in a sulphate (SO_4^{2-}) form and available for plant-uptake through the root system. Most soils contain sufficient *Thiobacillus* populations.
2. **Particle Size** – Sulphur needs to be broken down into fine particles to increase surface area for *Thiobacilli*. Nulandis' product ensures a very fine particle size for optimum conversion.
3. **Soil Temperature** – Maximum oxidation occurs at soil temperatures of 28-30 °C, medium conversion above 10 °C and very low to almost no conversion at temperatures of 5 °C and lower.
4. **Soil Moisture** – Moist soil promotes oxidization. Dry and flooded soils slow the oxidation process. Ideal soil moisture is field capacity.
5. **Oxygen** – Needs to be present for conversion. Placing sulphur deep into soil reduces SO_4 production somewhat.

Handling and Storage:

Tiger 90CR will blend and store well with other granular fertilizer products. Correct blending and handling procedures should be followed when using **Tiger 90CR**. Always use stringent dust control procedures to prevent concentrated flammable dusts from reaching a spark or flame source. Sulphur materials should not be blended and stored with strong oxidizing agents such as ammonium nitrate. Avoid extensive use of augers due to fracturing of the product.

First Aid

Skin Contact: Wash with mild soap and water.

Eyes: Rinse thoroughly with copious quantities of plain water. Inadequate rinsing may cause irritation. Do not use Boric Acid.

Ingestion: Solid Sulphur is virtually non-toxic. It should NOT be ingested.

Inhalation: Sulphur dust may irritate the mucous membranes of the respiratory passages.

Disclaimer: While every reasonable care has been taken to ensure that uniformity is correct, we do not warrant accuracy and recommend you obtain local and independent verification.

Produk beskrywing:

Tiger 90CR is 'n korrel produk met 'n hoë inhoud van swael wat afbreekbaar is en beide kan gebruik word as 'n bron van swael plant nutriënt en/of as 'n grondregstelling van grond met alkaliese probleme. Jaarlikse toedienings van **Tiger 90CR** sal die swaelvlakke in die grond verbeter sowel as voedingsverliese voorkom wat verband hou met sekere wateroplosbare voedingsstowwe.

Tiger 90CR is 'n unieke hoë inhoud swael kunsmis met uitstekende hanterings eienskappe wat landboukundige en ekonomiese voordele inhou.

Toediening en gebruik:

Tiger 90CR bied 'n seisoenlange bron van swael indien dit as deel van 'n gebalanseerde voedingsprogram gebruik word. **Tiger 90CR** kan alleen toegedien word of saam met ander korrelkunsmis vermeng en toegedien word. Die hoeveelheid benodig moet gebaseer word op landboukundige aanbevelings van grondontledings. Produk aanbevelings moet ook gebaseer word op die gewasverwydering syfers van swael. Hoër toedienings van **Tiger 90CR** sal hoë pH of alkaliese gronde versuur, sowel as natrium uit die grond loog weens die vorming van swaelsuur. Tydens hierdie proses word voedingsstowwe soos fosfate meer beskikbaar gemaak vir opname deur die plantwortels.

Algemeen:

Die volgende faktore is nodig vir die elementele swael om om te skakel na plant beskikbare sulfaat.

1. **Mikrobe aktiwiteit** - *Thiobacillus* bakterieë word benodig om te help met die oksidasie van **Tiger 90CR**. Sodra dit geoksideer is, is die swael in 'n sulfaat (SO_4^{2-}) vorm en beskikbaar vir plantopname deur die wortelstelsel. Meeste grondsoorte bevat voldoende *Thiobacillus* populasies.
2. **Deeltjiegrootte** - Swael moet afgebreek word in fyn deeltjies om die oppervlakarea te verhoog vir die *Thiobacilli*. Nulandis se produk verseker 'n baie fyn deeltjiegrootte vir optimale oksidasie.
3. **Grondtemperatuur** - Maksimum oksidasie vind plaas by grondtemperatuur van 28 – 30 °C, gemiddelde oksidasie bo 10 °C en baie lae tot amper geen oksidasie by temperatuur van 5 °C en laer.
4. **Grondvog** - Klam grond bevorder oksidasie. Droë en oornat grond verlaag die oksidasie proses. Ideale grondvog is by veldkapasiteit.
5. **Suurstof** - Moet teenwoordig wees vir omskakeling. Te diep plasing van **Tiger 90CR** in die grond sal die sulfaat produksie ietwat verlaag.

Hantering en berging:

Tiger 90CR kan maklik gestoor en vermeng word met ander korrelkunsmis produkte. Korrekte vermenging en hanterings prosedures moet gevolg word wanneer **Tiger 90CR** gebruik word. Maak altyd gebruik van streng stofbeheer prosedures om te voorkom dat gekonsentreerde vlambare stof in aanraking kom met 'n vonk- of vlambron. Swael bevattende produkte moenie vermeng of gestoor word met sterk oksideermiddels soos ammoniumnitraat nie. Vermyn die oormatige gebruik van vermenging om opbreking van die produk te verhoed.

Noodhulp

Velkontak: Was met 'n sagte seep en water.

Oë: Spoel deeglik uit met groot hoeveelhede skoon water. Onvoldoende uitspoel kan irritasie veroorsaak. Moenie Boorsuur gebruik nie.

Ingesluk: Soliede swael is feitlik nie giftig nie. MOENIE ingesluk word nie.

Inaseming: Swaelstof kan die slymvliese van die asemhalingskanale irriteer.

Vrywaring: Hoewel alle redelike sorg geneem is om eenvormigheid te verseker, waarborg ons nie die akkuraatheid nie en beveel aan dat u 'n plaaslike en onafhanklike verifikasie verkry.