

<b>Section 1: Product and Company Identification</b>	
PRODUCT NAME:	<b>UVASYS DUAL RELEASE BLUE</b>
SYNONYMS:	<b>Uvasys Grape Guards, Uvasys Sulphur Dioxide Generating Sheets / Pads</b>
PRODUCT USE:	Post harvest storage, mainly used for table grapes
COMPANY:	Tessara (Pty) Ltd
PHYSICAL ADDRESS:	35 Kinghall Ave, Epping 2, Cape Town 7460, South Africa
TELEPHONE NO:	+27-21-534 4541
EMERGENCY CONTACT PERSON:	Alwyn van Jaarsveld
EMERGENCY TELEPHONE NO:	+27-82-411 2896
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<b>Section 2: Composition</b>	
<b>Active Ingredient (35.85%)</b>	
PRODUCT NAME:	<b>Sodium Metabisulphite</b>
FORMULA:	Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub> ; molecular weight: 190
CAS NO:	7681-57-4
EEC NO:	231-673-01
FOOD ADDITIVE CODE:	E223
<b>Inert Ingredients (64.15%)</b>	
PRODUCT NAME:	<b>Polyester film (polyethylene terephthalate)</b>
CAS NO:	25038-59-9
PRODUCT NAME:	<b>Wax</b>
CAS NO:	64742-42-3
PRODUCT NAME:	<b>Polypropylene non-woven</b>
CAS NO:	9003-07-0
<b>Section 3: Hazard Identification</b>	
EMERGENCY OVERVIEW:	No particular hazard under normal conditions of use. Wash thoroughly after handling. Active ingredient (sodium metabisulphite) is encapsulated within wax matrix. Contact with water, heat, acids and/or oxidising agents may produce toxic gases. Contact with molten material may cause thermal burns.
ROUTES OF ENTRY:	Primary routes of exposure are skin contact, eye contact and inhalation. Routes of entry for gases include inhalation and eye contact.
POSSIBLE SYMPTOMS RELATED TO EXPOSURE:	
Skin:	May cause irritation. Contact with molten material may cause themal burns.
Eyes:	May cause irritation. Risk of damage to eyes.
Inhalation:	May cause irritation to upper respiratory tract. Gases produced in contact with water, heat, acids or oxidising agents may be harmful when inhaled.
Ingestion:	Not expected to occur. Sodium metabisulphite may be harmful if swallowed.

SIGNS AND SYMPTOMS OF OVEREXPOSURE:	May cause vomiting, asthmatic complaints, abdominal cramps, shortness of breath, nausea, diarrhea, coughing. Asthmatic or sulphite sensitive individuals may be susceptible to severe reactions.
<b>Section 4: First Aid Measures</b>	
General Advice:	Remove contaminated clothing.
Skin:	Wash thoroughly with soap and water. If burned by hot material, cool skin by quenching with large amounts of cool water. Seek medical attention if tissue appears damaged or if pain or irritation persists.
Eyes:	Remove contact lenses, Flush eyes and surrounding areas with water for at least 15 minutes with eyelids held open. Consult physician if irritation persists.
Inhalation:	Remove to fresh air. Get immediate medical attention for overexposure to sulphur dioxide gas and decomposition products. Inhale corticosteroid dose aerosol immediately if necessary.
Ingestion:	Not expected to occur. Rinse mouth then drink large quantities of water.
Allergic Reactions:	If allergic reactions are experienced, especially in asthmatic or sulphite sensitive individuals, seek medical advice as to whether exposure to the product should be curtailed or eliminated.
<b>Section 5: Fire Fighting Measures</b>	
SUITABLE EXTINGUISHING MEDIA:	Foam
UNSUITABLE EXTINGUISHING MEDIA:	Do not use water to extinguish fire. When mixed with water, product releases sulphur dioxide gas.
FIRE FIGHTING PROCEDURES:	Wear protective clothing and NIOSH-certified (or equivalent) self-contained breathing apparatus.
FLAMMABILITY:	Non-flammable
AUTO-IGNITION TEMPERATURE:	Not known. Will not ignite easily, but will burn.
EXPLOSION HAZARDS:	Non-explosive
SPECIAL HAZARDS:	Thermal decomposition will lead to the generation of toxic and corrosive gases and excess heat. Do not breathe fumes. Residue generated on thermal decomposition: flammable, fire risk, strong irritant to skin and tissue, incompatible with acids.
EXTINGUISHING WATER:	Contaminated extinguishing water must be disposed of in accordance with official regulations.
<b>Section 6: Accidental Release Measures</b>	
PERSONAL PRECAUTIONS:	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation and avoid breathing vapours. Wash hands thoroughly after handling.
ENVIRONMENTAL PRECAUTIONS:	Collect for disposal in a polyethylene bag. Tie the bag and dispose of according to applicable federal, state and local environmental regulations.

<b>Section 7: Handling and Storage</b>	
HANDLING:	Use only in well-ventilated areas. Remove sheets from pack only when required. Do not leave sheets exposed to air or to direct sunlight. Reseal bags immediately after use. Wash hands thoroughly after handling.
STORAGE:	Store packs in a dry, well-ventilated area away from water, heat, direct sunlight, acids and oxidising agents.
<b>Section 8: Exposure Controls / Personal Protection</b>	
SODIUM METABISULPHITE OCCUPATIONAL EXPOSURE LIMITS:	NIOSH REL = 5 mg/m <sup>3</sup> TWA ACGIH TLV = 5 mg/m <sup>3</sup> TWA; Appendix A4 (not classifiable as a human carcinogen)
SULPHUR DIOXIDE OCCUPATIONAL EXPOSURE LIMITS:	OSHA PEL = 13 mg/m <sup>3</sup> TWA NIOSH REL = 5 mg/m <sup>3</sup> TWA, 13 mg/m <sup>3</sup> STEL ACGIH TLV = 0.65 mg/m <sup>3</sup> STEL; Appendix A4 (not classifiable as a human carcinogen)
VENTILATION:	Ensure adequate ventilation.
IRRITANCY:	If allergic symptoms are experienced, seek medical advice as to whether exposure to the product should be curtailed or eliminated.
<b>Section 9: Physical and Chemical Properties</b>	
APPEARANCE:	White plastic laminated sheet
PHYSICAL STATE:	Solid
SPECIFIC GRAVITY:	Not known
SOLUBILITY IN WATER:	Not known
pH:	Not applicable
MELTING POINT / DECOMPOSITION TEMPERATURE:	Sodium metabisulphite decomposes at 150°C. Wax component starts melting at 60°C.
VAPOUR PRESSURE:	Not applicable
VAPOUR DENSITY:	Not applicable
<b>Section 10: Stability and Reactivity</b>	
CHEMICAL STABILITY:	Stable at ambient temperature and atmospheric pressure. Hygroscopic.
HAZARDOUS DECOMPOSITION PRODUCTS:	Sulphur dioxide, sodium sulphide, carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons, aldehydes and other products of combustion.
CONDITIONS TO AVOID:	High temperatures, humidity, moisture. Thermal decomposition of sodium metabisulphite at 150°C.
MATERIALS AND SUBSTANCES TO AVOID:	Acids, oxidising agents. Specific chemicals to avoid include nitrites, nitrates, sulphides.
<b>Section 11: Toxicological Information</b>	
ACUTE TOXICITY:	Sodium metabisulphite LD50 rat, oral = 1,540 mg/kg (OECD Guideline 401) LC50 rat, inhalation, 4h > 5.5 mg/ℓ (IRT)* LD50 rat, dermal > 2,000 mg/kg (OECD Guideline 402)* This product has not been tested. The statement has been derived from products of a similar structure or composition.

IRRITATION / CORROSION:	Sodium metabisulphite Skin, rabbit: non-irritant (OECD Guideline 404) Eyes, rabbit: risk of serious damage to eyes (OECD Guideline 405) Local lymph node assay, mouse: non-sensitising (OECD Guideline 429)
CARCINOGENICITY:	No components listed under OSHA, IARC or NTP.
<b>Section 12: Ecological Information</b>	
ECOLOGICAL EFFECTS:	No ecological problems are expected when the product is handled and used with due care.
TOXICITY:	Sodium metabisulphite Fish acute: DIN 38412 Part 15 static Leuciscus idus/LC50 (96h) = 316 g/mℓ* Fish chronic: OECD Guideline 210 Flow through Brachydanio rerio / NOEC (34d) > 316 g/mℓ* Daphnia acute: Directive 79/831/EEC static Daphnia magna / EC50 (48h) = 89 g/mℓ. Nominal concentration. Daphnia chronic: OECD Guideline 202, part 2 semistatic Daphnia magna / NOEC 21d > 10 mg/ℓ. Nominal concentration. Aquatic plants: Algae (other, static) / EC 50 (72h) = 43.8 mg/ℓ. Nominal concentration. Microorganisms: OECD Guideline 209 aquatic Activated sludge of a predominantly domestic sewage / No observed effect concentration (3h) > 1,000 mg/ℓ* COD: 165 mg/g (calculated) *This product has not been tested. The statement has been derived from products of a similar structure or composition.
<b>Section 13: Disposal Considerations</b>	
DISPOSAL METHODS:	Collect used pads and packaging for disposal in a polyethylene bag. Tie the bag and place in a regular trash receptacle - provided that this does not contravene any federal, state and local regulations. It is advisable to check on approved waste disposal methods with the relevant authorities or approved waste disposal companies.
HAZARDOUS CLASSIFICATION:	None of the components of Uvasys are listed as hazardous waste under 40 CFR 261.
RCRA WASTE NO:	Not listed
<b>Section 14: Transport Information</b>	
UN NO:	Not listed
HAZARD CLASS:	None
TDG (LAND TRANSPORT):	Not classified as a dangerous good under transport regulations.
IMDG (SEA TRANSPORT):	Not classified as a dangerous good under transport regulations.
IATA / ICAO (AIR TRANSPORT):	Not classified as a dangerous good under transport regulations.
SUBSIDIARY RISKS:	None

<b>Section 15: Regulatory Information</b>	
EUROPEAN UNION: REGULATION (EC) NO 1333/2008	Amends Directive 95/2EC on food additives other than colours and sweeteners and authorises the use of sulphur dioxide pads in the European Union on table grapes and lychees. The correct use of UVASYS will not lead to sulphite residues on table grapes greater than 10ppm.
DIRECTIVE 2008/84/EC:	Sodium Metabisulphite (E223), the active ingredient used in the manufacture of Uvasys, complies with the purity criteria on food additives other than colours and sweeteners set out in this directive and its amendments.
REGULATION (EC) NO 1935/2004:	Complies with the rules on materials and articles intended to come into contact with food.
REGULATION (EC) NO 450/2009	Complies with the EU labelling provisions.
DIRECTIVE 94/62/EC:	Complies with the packaging and packaging waste criteria regarding the presence of heavy metals (lead, cadmium, mercury and hexavalent chromium) in packaging materials set out in this directive and its amendments.
EEC HAZARD CLASSIFICATION:	Not regulated.
UNITED STATES OF AMERICA: EPA REGISTERED USE:	Pesticide (fungicide)
EPA REGISTRATION NO:	68506 – 2
CALIFORNIA:	68506 – 2 AA
EPA ESTABLISHMENT NO:	068506 – ZAF – 001
US TSCA STATUS:	Sodium metabisulphite is listed.
AUSTRALIA: APVMA REGISTERED USE:	Group M Fungicide
APVMA REGISTRATION NO:	52162
<b>Section 16: Other Information</b>	
Version 1	

**The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of the product and the company does not accept any liability whatsoever, except as otherwise provided by law, in respect of the use, application, adaptation of processing of any products described herein.**