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<b>Product : TANDEM WSG</b>	

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### 3. HAZARDS IDENTIFICATION:

Harmful to aquatic organisms. Harmful if swallowed.

May cause moderate eye irritation. Non-irritating to skin. Harmful by inhalation.

Dangerous for the environment.

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### 4. FIRST-AID MEASURES:

**Inhalation:** Move the person to fresh air. If person is not breathing, call 082 911 or an ambulance, then give artificial respiration, preferably mouth to mouth if possible. Call the poison control center or doctor for further treatment advice.

**Skin or clothing contact:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call the poison control center for treatment advice.

**Eye contact:** Hold eye open and rinse slowly and gently with plenty of water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing. Call the poison control center for treatment advice.

**Ingestion:** Call the poison control center or doctor for further treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told by a poison control center or doctor. Do not give anything to an unconscious person.

have the product container or label with you when calling a poison control center or doctor or going for treatment.

**Advice to physician:** There is no specific antidote. Treat symptomatically.

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### 5. FIRE-FIGHTING MEASURES:

Keep fire exposed containers cool by spraying with water.

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**Extinguishing Media:**

For small fires, use foam, carbon dioxide, dry powder or halon extinguishant. For large fires, use foam or water-fog; avoid use of water jet. Contain run-off water with, for example, temporary earth barriers.

**Fire Fighting Protective Equipment:**

A self-contained breathing apparatus and suitable protective clothing must be worn in fire conditions.

**6. ACCIDENTAL RELEASE MEASURES:**

**Personal precautions:**

**Respiratory Protection:** Supplied air respirators should be worn if large quantities of mist/dust are generated or prolonged exposure possible.

**Eye protection:** Chemical goggles when respirator does not provide eye protection.

**Protective clothing:** Gloves and protective clothing as necessary to prevent skin contact.

**Ventilation:** Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

**Environmental precautions:**

In case of large spillage of this product, avoid contact, isolate area and keep out animals and unprotected persons. For small spills wear personal protective equipment as specified by the label.

**FOR A LIQUID SPILL:** Dike and contain the spill with inert material (sand, earth, etc.,) and transfer the liquid and solid Diking materials to separate container for disposal.

**Methods for cleaning up:** Pesticide wastes are actually hazardous. Wastes resulting from the product may be disposed of on site at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix or rinsate is a violation of the South Africa law. If these waste cannot be disposed of according to label instructions, contact the state agency responsible for pesticide

**7. HANDLING AND STORAGE:**

**Handling:** Read the label before use. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Wash face and hands before eating, drinking or smoking.

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**Storage:** Store in original container in cool, dry, well ventilated area place away from ignition sources, heat or flame. Do not store below -12.2 °C.  
Do not store or apply this product in galvanized or unlined steel (except stainless steel) containers or spray tanks.

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## 8. EXPOSURE CONTROL / PERSONAL PROTECTION:

**Occupational exposure limits:** TWA 0.5 mg/m<sup>3</sup> – BASF recommended

**Engineering control measures:**

In industrial situations, concentration values below the TWA value should be maintained. Values may be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify the process or environment to reduce the problem.

**PERSONAL PROTECTIVE EQUIPMENT:**

**Respiratory protection:** Supplied air respirators should be worn if large quantities of mist/dust are generated or prolonged exposure possible.

**Clothing and Gloves:** Gloves and protective clothing as necessary to prevent skin contact.

**Eye protection:** Chemical goggles when respirator does not provide eye protection.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES:

**Appearance:** Off-white to tan cylindrical granules

**Odour:** Faint odour

**Explosive properties:** Not applicable

**Flash point:** Not applicable

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## 9. PHYSICAL AND CHEMICAL PROPERTIES (Contd.):

**Oxidising properties:** Not applicable

**pH:** 4-9

**Bulk density:** 600 g/l

**Solubility in water:** Highly miscible

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**10. STABILITY AND REACTIVITY:****Storage stability:** Stable for 2 years, but do not store below -12.2°C**Incompatibility:** Oxidising agents and reducing agents

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**11. TOXICOLOGY INFORMATION:****Acute oral LD<sub>50</sub>:** Rat (both sexes) > 5000 mg/kg (Imazapyr)

Rat &gt;10740 mg/kg (Glyphosate)

**Acute dermal LD<sub>50</sub>:** Rabbit (both sexes) > 2000 mg/kg (Imazapyr)

Rat &gt;4000 mg/kg (Glyphosate)

**Acute inhalation LC<sub>50</sub> (4 h)** Rat, no mortality > 1.58 mg/l(Imazapyr)

Rat &gt;12,2 mg/l (Glyphosate)

**Acute skin irritation:** Irritating (Imazapyr)

Non-irritant to rabbit skin. It is not a skin sensitiser.

**Acute eye irritation:** Irritating to eye with recovery by day 3 (Imazapyr)

Moderate irritant to rabbit eyes (Glyphosate)

**Dermal sensitisation:** Mild sensitizer (Imazapyr)**Carcinogenicity:** Not listed**Mutagenicity:** No mutagenic activity was observed in Technical Imazapyr by all test methods used.**Teratogenicity:** No teratogenic or fetotoxic effects were found at all dose levels tested in mice and rats.

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**12. ECOLOGICAL INFORMATION:****Birds (LD<sub>50</sub>):***Imazapyr* is practically non-toxic to birds.

Bobwhite quail and mallard ducks is &gt;2,150 mg/kg (WSSA 1994)

Oral toxicity (mallard ducks): &gt; 2,150 mg/kg

*Glyphosate*

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Acute oral LD<sub>50</sub> for bobwhite quail >3851 mg/kg

Dietary LC<sub>50</sub> (8d) for quail and ducks >4640 mg/kg diet

**Fish (LC<sub>50</sub>):**

*Imazapyr* is of low toxicity to fish and invertebrates.

Rainbow trout; bluegill sunfish (channel catfish): > 100 mg/l

*Glyphosate* LC<sub>50</sub> (96h) for trout = 86

bluegill sunfish = 120

harlequin fish 168

**Daphnia(LC<sub>50</sub>):**

Daphnia magna: > 100 mg/l (*Imazapyr*)

LC<sub>50</sub> (48h) 930 mg/l (*Glyphosate*)

**Algae:**

**Imazapyr:**

It has a low toxicity algae.

7-Day EC<sub>50</sub> :Freshwater blue-green alga (*Anabaena flos-aquae*): 11.7 mg/l

Freshwater green alga (*Selenastrum capricornutum*): 71.0 mg/l

EC<sub>50</sub> (72h) for *Selenastrum capricornutum* 485 mg/l (*Glyphosate*)

**Glyphosate:**

Toxic to *Selenastrum capricornutum*.

E<sub>b</sub>C<sub>50</sub> (72 h): 1.4 mg/l.

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**12. ECOLOGICAL INFORMATION (Contd.):**

E<sub>r</sub>C<sub>50</sub> (72 h): 1.8 mg/l.

**Bees** It is of low toxicity to bees: >μ100 g/bee.

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**13. DISPOSAL CONSIDERATIONS:**

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**Pesticide disposal:**

Wastes resulting from the product may be disposed of on site at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of the federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation.

**Package product wastes:**

**For plastic containers:** Triple rise (or equivalent) and rinsate to spray tank. Then offer recycling or reconditioning, or puncture and 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.

**For bulk containers:** Reusable containers should be returned to the point of purchase for cleaning and re-filling.

**For mini bulk containers:** Clean all tanks on an approved loading pad so rinsate can be collected and mixed into the solution or in a dedicated tank. Using a high-pressure sprayer, rinse several times with small amounts of water to minimize rinsate.

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**14. TRANSPORT INFORMATION:**

UN No.: 3077

**ADR**

Proper shipping name:

Environmentally hazardous substance, solid, n.o.s. ( Imazapyr plus Glyphosate )

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**14. TRANSPORT INFORMATION (Contd.):**

Class: 9  
Classification code: M7  
Packing group: III  
Label: 9  
Hazard ID no: 90

**IMDG**

Proper shipping name:

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Environmentally hazardous substance,solid,n.o.s.( Imazapyr plus Glyphosate )

Class: 9  
Label: 9 Marine Pollutant  
Packing Group: III

**ICAO/IATA**

Proper shipping name:

Environmentally hazardous substance,solid,n.o.s.( Imazapyr plus Glyphosate )

Class : 9  
Label: 9  
Packing Group: III  
Pack Instr. Passenger: Y911(30kg) ; 911 (No limit)  
Pack Instr. Cargo: 911( No limit)

**Tremcard Nr. CEFIC: 90GM7-III**

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**15. REGULATORY INFORMATION:**

**Symbol:** Xi; N

**Indication of danger:** Irritant; Dangerous to the environment.

**Risk phrases:**

**R36** Irritant to eyes

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**15. REGULATORY INFORMATION (Contd.):**

**R 51/53** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Safety phrases:**

**S 2** Keep out of reach children.  
**S 26** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
**S 39** Wear eye/face protection.  
**S 61** Avoid release to the environment.

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**16. OTHER INFORMATION:**



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**References:**

- The Pesticide Manual; Thirteenth Edition; Editor Clive Tomlin; Crop Protection Publications, 2003.
- Dangerous Goods Regulations; IATA International Air Transport Association, 47<sup>th</sup> Edition, Effective 1 January 2006.
- IMDG Code, Vol. 2, 2005 Edition.
- ECB-ESIS(European chemical Substances Identification System)

Use: Herbicide

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**The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors or omissions or the consequence thereof.**

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**END OF MSDS.**