

# MATERIAL SAFETY DATA SHEET

## Section 1 - Identification of Chemical Product and Company

**Company:** Spectra Chemicals and Commodities (Shanghai) Co.,Ltd.

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E-mail: md@spectra.com.cn

**Product Name:** Diuron 900 WDG

**Product Use:** Agricultural Herbicide.

**Creation Date:** 25<sup>th</sup>, July 2005

**Revision Date:** 24<sup>th</sup>, July 2008

## Section 2 - Hazards Identification

Hazard classification: Hazardous substance. Non-dangerous goods.

Risk phrases: R48/22 Danger of serious damage to health by prolonged exposure/Harmful if swallowed.

Safety phrases: S20/21 When using do not eat or drink/smoke

S22/23 Do not breathe dust/spray

S24/25 Avoid contact with skin/eyes

S29/35 Do not empty into drains/Dispose of material and container in a safe way

S36/37 Wear suitable protective clothing/gloves

SUSDP Classification: Exempt

ADG Classification: Not a dangerous good

UN Number: None allocated

## Section 3 - Composition/Information on Ingredients

Ingredients	CAS Number	Proportion
Diuron	330-54-1	900g/kg
Inert filler, dispersants		Balance

## Section 4 - First Aid Measures

**Skin contact:** Remove contaminated clothing. Wash contaminated skin with soapy water. If skin irritation develops, get medical attention. Wash clothing thoroughly before re-use.

**Eye contact:** Rinse eye(s) with clean running water for 15 mins. Get medical attention.

**Ingestion:** Rinse mouth. Give water to drink if patient is conscious. DO NOT induce vomiting. If vomiting occurs ensure patient can breathe, then give water to drink. Get medical attention.

## Section 5 - Fire Fighting Measures

**Suitable extinguishing media:** Water fog or mist, foam, carbon dioxide, dry powder.

**Unsuitable extinguishing media:** None known.

**Special hazards in fire:** Granules will burn, releasing carbon oxides, nitrogen oxides, and chlorine compounds.

**Required special protective equipment for fire-fighters:** Wear self contained breathing apparatus if exposed to combustion products, especially in reduced air situations.

**Hazchem code:** Xn harmful.

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## Section 6 - Accidental Release Measures

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**Emergency procedures:** Wear protective equipment to prevent skin and eyes being affected. Evacuate unprotected and unnecessary personnel from area of spill. If material is spilling from a container, attempt to retain as much as possible in the original package. Prevent spillage entering drains or watercourse.

**Methods for containment & cleanup:** Scoop up spilled material into suitable bins/containers. If possible, collect pure material first. This may be re-usable. Scoop Diuron 900 and contaminated soil next. Take enough soil to ensure all Diuron 900 is included. This material should be disposed of at a suitable landfill. Personal protective equipment and clothing should be washed with soapy water.

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## Section 7 - Handling and Storage

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**Handling:** Keep away from food, drink, and animal feedstuff. KEEP OUT OF REACH OF CHILDREN. Wear suitable Personal Protective Equipment when handling and spraying.

**Storage:** Store in the original container in a dry, cool, ventilated, LOCKED area. DO NOT store in prolonged sunlight. DO NOT store with food, seed, or animal feedstuff.

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## Section 8 - Exposure Controls and Personal Protection

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**National exposure standards:** TWA - 10 mg/m<sup>3</sup> over 8 hour day, 5 day week, entire working life. STEL – not established.

**Engineering measures:** Provide assisted air-flow where natural ventilation is not sufficient.

**Personal protection equipment:**

Eye/face protection: Goggles or glasses to AS 1366, AS/NZS1337

Hand/skin protection: Overalls, PVC gloves and apron, face shield

Respiratory protection: Should not be necessary under normal conditions. If spray mist may be encountered, a particulate filter to AS/NZS 1715 should be worn.

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## Section 9 - Physical and Chemical Properties

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<b>Appearance</b>	White granule
<b>Odour</b>	Faint.
<b>pH</b>	Neutral
<b>Melting/Freezing Point</b>	Diuron decomposes at $\approx 180-190^{\circ}\text{C}$ .
<b>Solubility in Water</b>	Diuron – 36 ppm in water.
<b>Boiling Point/Range</b>	Diuron melts at $158^{\circ}\text{C}$ .
<b>Specific Gravity (H<sub>2</sub>O=1)</b>	Bulk density $\approx 0.9$ , Diuron tech 1.48.
<b>Vapour Pressure</b>	Negligible.
<b>Vapour Density</b>	N/A
<b>Flash Point</b>	N/A

**Ignition Temperature** Not available. Probably over  $100^{\circ}\text{C}$ .

**Flammable Limits** N/A

**Explosion Properties** Not normally applicable.

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## Section 10 - Stability and Reactivity

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**Chemical stability:** Stable in water at neutral pH, hydrolysed by acids and alkalis.

**Conditions to avoid:** High temperatures.

**Materials to avoid:** Acids, alkalis, oxidising agents.

**Hazardous decomposition products:** oxides of carbon and nitrogen, chlorine

**Hazardous reactions:** None.

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## Section 11 - Toxicological Information

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**Acute toxicity:** Diuron LD<sub>50</sub> (oral, rat) 3400 mg/kg, (dermal, rabbit) 20,000 mg/ka

**Chronic toxicity:** > 6 mg/kg/day for 3 years in rats showed no effects. Other trials showed higher rates causing growth retardation, slight anaemia, liver and/or spleen enlargement.

**Possible routes of exposure:** Inhalation of spray mist is the most likely cause of ingestion.

**Range of effects. Excessive exposure may affect human health as follows:**

Skin contact: May (rarely) result in irritation, possibly by abrasion by solid product, possibly from concentrated slurry, unlikely from diluted spray solution.

Eye contact: May cause irritation, likely by abrasion by solid product, possibly from concentrated slurry, unlikely from diluted spray solution.

Inhalation/ingestion: Ingestion of large amounts may cause nausea, small amounts unlikely to do so. Inhalation of dust (from disintegrated granules) likely to cause respiratory irritation.

**Dose/conc./conditions likely to cause injury:** Probably 250+ grams for acute effects,

Delayed effects if any:

Relevant negative data: Repeated doses do not produce carcinogenic effects.

**Ecotoxicity:**

Aquatic organisms: Toxic to fish at 1-10 ppm levels.

Flora: Toxic to many plants. Has been recorded killing large trees at higher rates.

Fauna: Low toxicity to mammals.

Soil organisms: Toxic to soil algae. Degraded (slowly) by soil fungi and microbes.

Bees: Not toxic.

Long term: A relatively long lasting herbicide with soil residual activity.

Ozone effects: None recorded.

**Persistence/degradation:** (as per Environment Australia [www.ea.gov.au](http://www.ea.gov.au) )

**Mobility:** Can leach, especially in sandy soils. This may lead to unwanted damage to trees.

Bio-accumulative potential: Does not accumulate in fatty tissue ( $K_{ow}$  logP.= 2.85)

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## Section 12 - Ecological Information

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**Ecotoxicity:**

**Aquatic organisms:** Very low toxicity to fish, crustaceans & micro-organisms. Highly toxic to most plants and algae.

**Flora:** Toxic to plants

**Fauna:** Low toxicity to birds, mammals, reptiles, etc.

**Soil organisms:** Low toxicity to worms, bacteria, insects. Toxic to soil algae.

**Bees:** Low toxicity.

**Long term:** Atrazine is a soil persistent herbicide that may have effects up to 2 years after application, depending on rate.

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**Ozone effects:** None recorded.  
**Persistence/degradation:** Atrazine is a relatively persistent herbicide. It has a half life of weeks to months, depending on soil bio-activity.  
**Mobility:** Atrazine may leach, especially in light sandy soils.  
**Bioaccumulative potential:** Unknown but probably low.

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## Section 13 - Disposal Considerations

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**Product:** Whenever possible, product should be used for its intended purpose, even if reclaimed from spillage (reclaimed product must be uncontaminated).  
**Containers:** Whenever possible, follow directions given on container. If not available, shake out boxes and rinse plastic bags before disposal. Treat rinsings as for product above. Break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.  
**Sewage:** Do not dispose of product or rinsings into sewage systems or septic tanks.

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## Section 14 - Transport Information

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**U.N. Number** None allocated  
**Proper Shipping Name** None allocated  
**DG Class** Not a dangerous good.  
**Hazchem Code**  
**Packing Group**  
**Special precautions** Do not store with foodstuffs.

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## Section 15 - Regulatory Information

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Hazardous according to the criteria of Worksafe Australia.  
Hazchem category: Xn Harmful.  
Risk phrases: R48/22 Danger of serious damage to health by prolonged exposure if swallowed.  
Safety phrases: S20/21 When using do not eat or drink/smoke S22/23 Do not breathe dust/spray  
S24/25 Avoid contact with skin/eyes S29/35 Do not empty into drains/Dispose of material and container in a safe way S36/37 Wear suitable protective clothing/gloves

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## Section 16 - Other Information

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This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

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END OF MSDS

# Spectra AG