

<b>Bayer CropScience Limited</b>		<b>MATERIAL SAFETY DATA SHEET</b> <i>(As per Schedule 9, Rule 17 of the Manufacture, Storage and Import of Hazardous Chemicals Rules 1989 Amendment 2003)</i>	
<b>KING FOG ULV 1.25%</b>			
MSDS NO. : <b>5947030</b>	ISSUE NO. : <b>03</b>	DATE OF ISSUE : <b>01.08.2005</b>	PAGE 1 OF 7
<b>1. CHEMICAL IDENTITY</b>			
1.1	PRODUCT NAME / TRADE NAME : <b>KING FOG ULV 1.25%</b>		
1.2	CHEMICAL CLASSIFICATION	Pyrethroid	
1.3	CHEMICAL NAME	: <b>Deltamethrin</b>	
1.4	SYNONYMS	: -	
1.5	FORMULA	: <b>C<sub>22</sub>H<sub>19</sub>Br<sub>2</sub>NO<sub>3</sub></b>	
1.6	C.A.S. NO.	: <b>52918-63-5</b>	
1.7	U.N. NO.	: 1992	
<b>1.8 REGULATED IDENTIFICATION</b>			
1.8.1	SHIPPING NAME CODES/LABEL	: FLAMMABLE LIQUID, N.O.S. (DELTAMETHRIN, SOLVENT C-9 SOLUTION), Class <b>3, Packaging group III.</b>	
		Hazard Classification	
		F - Highly flammable - <b>Yes</b>	
		Xn - Harmful - NOT KNOWN	
		T - Toxic - <b>Yes</b>	
		N - Dangerous For Environment - <b>Yes</b>	
		R phrases - <b>R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</b>	
		<b>R23/25 -Toxic by inhalation and if swallowed.</b>	
		S phrases - <b>S35 This material and its container must be disposed of in a safe way.</b>	
1.8.2	HAZCHEM NO.	: <b>3Y</b>	
1.8.3	HAZARDOUS WASTE ID NO	: <b>29</b>	
1.9	HAZARDOUS INGREDIENTS	CAS No.	%
		<b>52918-63-5</b>	<b>1.25</b>
	Butylated Hydroxy Toluene	128-37-0	0.1
	CSP	Not Available.	58.62
	C-IX	Not Available.	40.0
<b>2. PHYSICAL AND CHEMICAL DATA</b>			
2.1	PHYSICAL STATE	: Liquid.	

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2.2	APPEARANCE	:	Pale Yellow colour
2.3	ODOUR	:	Not Specific.
2.4	<del>SPECIFIC GRAVITY</del> / DENSITY (Water = 1) (g/ml)	:	0.85 - 0.90
2.5	VAPOUR PRESSURE AT 20 °C	:	Not Available
2.6	VAPOUR DENSITY (Air=1)	:	Not Available
2.7	BOILING RANGE/POINT °C	:	Not Available
2.8	MELTING/FREEZING POINT °C	:	Not Available
2.9	SOLUBILITY IN WATER	:	Forms emulsion in water.
2.10	pH	:	Slight Alkaline
<b>3. FIRE AND EXPLOSION HAZARD DATA</b>			
3.1	FLAMMABILITY	:	Flammable when exposed to heat and flame.
3.2	FLASH POINT. (°C)	:	> 24.5 °C
3.3	AUTO - IGNITION TEMP. (°C)	:	Not Available
3.4	UPPER EXPLOSION LIMIT ( % By Volume )	:	Not Available
3.5	LOWER EXPLOSION LIMIT ( % By Volume )	:	Not Available
3.6	TDG FLAMMABILITY	:	Not Available
3.7	EXPLOSION SENSITIVITY TO IMPACT	:	Not Available
3.8	EXPLOSION SENSITIVITY TO STATIC ELECTRICITY	:	Not Available
3.9	HAZARDOUS COMBUSTION PRODUCTS	:	Emits toxic fumes of Br <sub>2</sub> , Cn <sup>-</sup> , NO <sub>2</sub> and Carbon monoxide
3.10	HAZARDOUS POLYMERISATION	:	Not Available
3.11	CUMBUSTIBLE LIQUID	:	Not Available

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3.12 EXPLOSIVE MATERIAL		Not Available	
3.13 CORROSIVE MATERIAL		: Not Available	
3.14 FLAMMABLE MATERIAL		: Not Available	
3.15 OXIDISER		: Not Available	
3.16 PYROPHORIC MATERIAL		: Not Available	
3.17 ORGANIC PEROXIDE		: Not Available	
3.18 OTHERS		: Not Available	
<b>4. REACTIVITY DATA</b>			
4.1 CHEMICAL STABILITY		: Not Available	
4.2 INCOMPATIBILITY WITH OTHER MATERIAL		: Not Available	
4.3 REACTIVITY		: Not Available	
4.4 HAZARDOUS REACTION PRODUCTS		Not Available	
<b>5. HEALTH HAZARD DATA</b>			
5.1 ROUTS OF ENTRY		: Skin contact, Eye Contact, Inhalation, Ingestion.	
5.2 EFFECTS OF EXPOSURE / SYMPTOMS		: Cutaneous Irritation, dizziness, headache, restlessness, nausea and vomiting, epigastric pain, muscular fasciculation of limbs, unconsciousness, convulsions, necrosis, dermatitis, lungs Injury and coma (very high doses). Skin and eye paraesthesiae which may be severe. Usually transient with resolution within 24 hours. Erosion to teeth. Swallowing may Cause Injury or Death	
5.3 EMERGENCY TREATMENT		: Remove victim from affected area to fresh air. Keep patient warm and at rest. Take off all contaminated clothing immediately. Wash off immediately with soap and plenty of water. In case of contact with eyes, rinse immediately with plenty of water. Wash out mouth with water. Do not induce vomiting. (Induce vomiting if medical treatment is not readily available, patient is fully conscious and time since ingestion is less 1 hour. Vomit should not get into the respiratory tract). Seek URGENT medical advice after significant exposure.	

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5.4	TLV (ACGIH)	: Not Available	
5.5	STEL	: Not Available	
5.6	PERMISSIBLE EXPOSURE LIMIT	: Not Available	
5.7	ODOUR THRESHOLD	: Not Available	
5.8	LD 50 (Routes & Species )	: Oral rat : 130 mg/Kg.	
		Dermal rat : Not Available	
	LC 50 (Routes & Species )	: Inhalation rat : Not Available	
		TOXICOLOGICAL INFORMATION	
		Carcinogenicity - Not Available	
		Genotoxicity - Not Available	
		Reproductive Toxicity - Not Available	
		Other Information - Not Available	
		ECOLOGICAL INFORMATION	
		Mobility - Not Available	
		Persistence / Degradability - Not Available	
		Bio-Accumulation - Not Available	
		Aquatic Toxicity - Not Available	
		Other Toxicity Not Available	
5.9	NFPA HAZARD SIGNALS	:	
	HEALTH	: Not Available	
	FLAMMABILITY	: Not Available	
	REACTIVITY	: Not Available	
	SPECIAL	: Not Available	
<b>6.</b>	<b>PREVENTIVE MEASURES</b>		
6.1	PERSONAL PROTECTIVE EQUIPMENT	:	
	-- GLOVES	: Rubber / Nitrile Hand gloves	
	-- RESPIRATORY	: Approved Respirator (Organic vapour/ Air line mask)	
	-- EYES	: Chemical safety goggles	
	-- FOOTWARE	: Conductive shoes	
	-- CLOTHING	: Protective clothing.	
	-- OTHER	: --	
6.2	HANDLING AND STORAGE PRECAUTIONS	: Use in close system and area provided with appropriate exhaust ventilation. Keep away from sources of ignition - No smoking.	

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		Keep away from children, food, drink and animal feeding stuffs. Store in original container. Keep tightly closed in a dry, cool and well-ventilated place. Keep away from heat, direct sunlight.	
<b>7. EMERGENCY AND FIRST AID MEASURES</b>			
7.1 FIRE :			
7.1.1 FIRE EXTINGUISHING MEDIA : Water Mist, DCP, Foam, CO <sub>2</sub> .			
7.1.2 SPECIAL PROCEDURES : Use self contained breathing apparatus. Wear full protective suit. If possible and without risk, remove intact containers from exposure to fire. Otherwise, spray unopened containers with water to keep cool. Contain fire-fighting water by bunding area with sand or earth. Collect contaminated firefighting water separately, must not be discharged into the drains. Do not whirl around the product.			
7.1.3 UNUSUAL HAZARDS : Emits toxic fumes of Br <sub>2</sub> , Cn <sup>-</sup> , NO <sub>2</sub> and Carbon monoxide.			
7.2 EXPOSURE			
7.2.1 FIRST AID MEASURE : Seek medical advice immediately and show this container or label. <b>Eyes:</b> Wash eyes with large amounts of water immediately, occasionally lifting upper and lower lids for approximately 15-20 minutes. Instillation of local anesthetic drops e.g. 1% Amethocaine hydrochloride eye drops. Give analgesics as necessary. <b>Skin:</b> Remove contaminated clothing and shoes immediately. Wash affected area with soap and mild detergent and large amounts of water approximately 15 - 20 minutes. Apply vitamin E cream or simple toilet milks. <b>Inhalation:</b> Remove the casualty into fresh air and keep him calm. Seek Medical help immediately. Ingestion Not Available Treat symptomatically and supportively. Endotracheal intubation should be done and gastric lavage performed, followed by administration of charcoal. <b>Ingestion:</b> Wash out mouth with water. Induce vomiting if medical treatment is not readily available And patient is fully conscious and time since ingestion			

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7.2.2 ANTIDOTE/DOSAGE		<p>less 1 hour. (Vomit should not get into the respiratory tract).</p> <p>: Systemic Poisoning :  Monitor: Respiratory, Cardiac and Kidney functions.  Observe: Electrocardiograph, Pulmonary Oedema in event of inhalation  Gastric Lavage, Charcoal Administration, Endotracheal Intubations, artificial respiration as necessary.  Elimination by: Dialysis, Haemo - Perfusion.  Ant convulsion Therapy : Diazepam I.V.  Contraindications: 1 Adrenergic Compound.  2 Atropine.  Recovery : Spontaneous.  <b>Must not be confused with organophosphorus compounds</b></p>	
7.3 SPILLS		:	
7.3.1 STEPS TO BE TAKEN		<p>: Avoid contact with spilled material or contaminated surfaces.  If ordinary clothing becomes contaminated remove it immediately.  When dealing with the spillage do not eat, drink or smoke and wear personal protective clothing.  Sweep or preferably vacuum up spillage using equipment fitted with high efficiency final filter. Avoid creating a dust. Clean the area with soap solution  Do not allow entering in drains or waterways.  Transfer collected material to heavy duty plastic drums and keep safe for disposal.</p>	
7.3.2 WASTE DISPOSAL METHOD		<p>: Product disposal in accordance with regulations for special waste, it must be taken to special waste disposal site and the residue should be incinerated at a suitable waste incineration plant in accordance with official regulations. Where large quantities are concerned consult the supplier.  This material and it's container must be disposed as a hazardous waste. Avoid release to the environment.</p>	
8. ADDITIONAL INFORMATION / REFERENCE		: BCS GLOBAL QHSE MSDS Library - SAP MSDS System - Material/UVP No. – 5940303	
9. MANUFACTURER / SUPPLIERS DATA			
9.1 NAME OF FIRM		: Bayer CropScience Limited	

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9.2 MAILING ADDRESS	: 6301-10A,GIDC, Ankleshwar, (Gujarat) Pin Code: 393 002		
9.3 TELEPHONE	: <b>91-2646-551007-Ankleshwar</b> <b>91-22-25311030-Thane</b>		
9.4 TELEFAX NO	: <b>91-2646-551281-Ankleshwar</b> <b>91-22-2545223-Thane</b>		
9.5 E – MAIL	: <b><u><a href="mailto:rajen.salot@bayercropscience.com">rajen.salot@bayercropscience.com</a></u></b> <b><u><a href="mailto:sadanand.dandekar@bayercropscience.com">sadanand.dandekar@bayercropscience.com</a></u></b>		
9.6 TELEGRAPHIC ADDRESS	:		
9.7 a) CONTACT PERSON IN EMERGENCY	: <b>Emergency Control Center</b> <b>Bayer Crop Science Limited,</b> <b>Kolshet Road,</b> <b>Thane (Maharashtra State) 400 607</b> <b>Telephone No. 022-25311884</b> <b>022-25311885</b>		
9.7 b) LOCAL BODIES INVOLVED	: <b>Disaster Prevention Management Center,</b> <b>GIDC, Ankleshwar.</b>		
9.8 STANDARD PACKING	: <b>1 Lt. Aluminium Bottle.</b>		
9.9 TREMCARD DETAILS / REF. NO.	: <b>Available</b>		
10. <b>DISCLAIMER</b>	: Information contained in this Material Safety Data Sheet is believed to be reliable but no representation guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. It is up to Manufacturer / Seller to ensure that the information contained in the Material Safety Data Sheet is relevant to the product manufactured / handled or sold by him as the case may be. The company makes no warranties expressed or implied in respect of the adequacy of this document for any particular purpose.		

Changes since the last version are highlighted in **Red Bold Italic**. This version replaces all previous versions.