

# Material Safety Data Sheet



PRODUCT NAME **Imtrade Kung Fu 250 Insecticide**  
APVMA Product Code: 59230

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## 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

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**Supplier Name** **IMTRADE AUSTRALIA PTY LTD**  
**Address** 17 Ocean Street, Kwinana, Western Australia, AUSTRALIA, 6167  
**Telephone** 1800 171 799  
**Fax** 1800 171 788  
**Emergency** In a Transport Emergency Dial 000 – Police or Fire Brigade  
**Web site** <http://www.imtrade.com.au>  
**Product Use:** Agricultural insecticide for use as described on the product label.  
**Creation Date:** **March, 2008**  
**This version issued:** **First issue: March, 2010**  
**Product type:** Lambda cyhalothrin is a pyrethroid insecticide.

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## SECTION 2 - HAZARDS IDENTIFICATION

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### Statement of Hazardous Nature

This product is classified as: T, Toxic. N, Dangerous to the environment. Hazardous according to the criteria of SWA.

Dangerous according to the Australian Dangerous Goods (ADG) Code.

**Risk Phrases:** R21, R25, R26, R50/53. Harmful in contact with skin. Toxic if swallowed. Very toxic by inhalation. Very toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment.

**Safety Phrases:** S20, S23, S38, S45, S60, S61, S1/2, S24/25, S36/37/39. When using, do not eat or drink. Do not breathe vapours or spray mists. In case of insufficient ventilation, wear suitable respiratory equipment. In case of accident or if you feel unwell, contact a doctor or Poisons Information Centre immediately (show this MSDS where possible). This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/Safety Data Sheets. Keep locked up and out of reach of children. Avoid contact with skin and eyes. Wear suitable protective clothing, gloves and eye/face protection.

**SUSDP Classification:** S6

**ADG Classification:** Class 6.1: Toxic substances.

**UN Number:** 3352, PYRETHROID PESTICIDE, LIQUID, TOXIC

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### Emergency Overview

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**Physical Description & Colour:** Beige coloured liquid.

**Odour:** No data.

**Major Health Hazards:** Lambda-cyhalothrin is toxic by the oral route. Skin contact may cause tingling, burning or numbness sensations (particularly at the point of skin contact). Major exposures may cause tremors, incoordination, paralysis or other disrupted motor function and confusion or loss of consciousness. This product is very toxic by inhalation, toxic if swallowed, harmful in contact with skin.

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### Potential Health Effects

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**No cases of accidental human poisoning have been described.** Symptoms that may arise if this product is mishandled and overexposure occurs are nausea, vomiting, diarrhoea, abdominal pain, ataxia, unsteady gait, hyperexcitability, salivation, tremors and incontinence. Larger doses may cause convulsions and loss of consciousness.

#### Inhalation:

**Short Term Exposure:** Available data shows that this product is very toxic, but symptoms are not available. In addition product may be irritating.

**Long Term Exposure:** No data for health effects associated with long term inhalation.

#### Skin Contact:

**Short Term Exposure:** Available data shows that this product is harmful, see symptoms above. In addition product will be irritating and may cause tingling, burning or numbness sensations.

**Long Term Exposure:** No data for health effects associated with long term skin exposure.

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Issued by: Imtrade Australia Pty Ltd

Phone: (08) 9419 0333

Poisons Information Centre: 13 1126 from anywhere in Australia, (0800 764 766 in New Zealand)

**Eye Contact:**

**Short Term Exposure:** This product may be irritating to eyes, but is unlikely to cause anything more than mild transient discomfort.

**Long Term Exposure:** No data for health effects associated with long term eye exposure.

**Ingestion:**

**Short Term Exposure:** Significant oral exposure is considered to be unlikely. Available data shows that this product is toxic, but further symptoms are not available. However, this product may be irritating to mucous membranes but is unlikely to cause anything more than transient discomfort.

**Long Term Exposure:** No data for health effects associated with long term ingestion.

**Carcinogen Status:**

**SWA:** No significant ingredient is classified as carcinogenic by SWA.

**NTP:** No significant ingredient is classified as carcinogenic by NTP.

**IARC:** No significant ingredient is classified as carcinogenic by IARC.

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**SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS**

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Ingredients	CAS No	Conc,%	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )
Lambda-cyhalothrin	91465-08-6	250g/L	not set	not set
Other non hazardous ingredients	various	to 100	not set	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak "is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

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**SECTION 4 - FIRST AID MEASURES**

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**General Information:**

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this MSDS with you when you call.

**Inhalation:** If inhalation occurs, contact a Poisons Information Centre. Urgent hospital treatment is likely to be needed. Remove source of contamination or move victim to fresh air. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice. DO NOT allow victim to move about unnecessarily. Symptoms of pulmonary oedema can be delayed up to 48 hours after exposure.

**Skin Contact:** Wash gently and thoroughly with warm water (use non-abrasive soap if necessary) for 10-20 minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts) and completely decontaminate them before reuse or discard.

**Eye Contact:** No effects expected. If irritation does occur, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes. Take special care if exposed person is wearing contact lenses.

**Ingestion:** If swallowed, do NOT induce vomiting; rinse mouth thoroughly with water and contact a Poisons Information Centre, or call a doctor at once. Give activated charcoal if instructed.

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**SECTION 5 - FIRE FIGHTING MEASURES**

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**Fire and Explosion Hazards:** There is little risk of an explosion from this product if commercial quantities are involved in a fire.

Fire decomposition products from this product are likely to be toxic and corrosive if inhaled. Take appropriate protective measures.

**Extinguishing Media:** Water fog or fine spray is the preferred medium for large fires. Try to contain spills, minimise spillage entering drains or water courses.

**Fire Fighting:** If a significant quantity of this product is involved in a fire, call the fire brigade. There is little danger of a violent reaction or explosion if significant quantities of this product are involved in a fire. Recommended personal protective equipment is liquid-tight chemical protective clothing and breathing apparatus.

**Flash point:** Does not burn.

**Upper Flammability Limit:** Does not burn.

**Lower Flammability Limit:** Does not burn.

**Autoignition temperature:** Not applicable - does not burn.

**Flammability Class:** Does not burn.

**MATERIAL SAFETY DATA SHEET**

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**Accidental release:** In the event of a major spill, prevent spillage from entering drains or water courses. Evacuate the spill area and deny entry to unnecessary and unprotected personnel. Wear full protective chemically resistant clothing including eye/face protection, gauntlets and self contained breathing apparatus. See below under Personal Protection regarding Australian Standards relating to personal protective equipment. Suitable materials for protective clothing include rubber, PVC. Eye/face protective equipment should comprise as a minimum, protective goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned below (section 8). Otherwise, not normally necessary.

Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Because of the toxicity of this product, special personal care should be taken in any cleanup operation. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this MSDS and the label, instructions on the label prevail. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

**SECTION 7 - HANDLING AND STORAGE**

**Handling:** Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this MSDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

**Storage:** This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. Store in a cool, well ventilated area. Check containers periodically for leaks. Containers should be kept closed in order to minimise contamination. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. If you keep more than 10000kg or L of Dangerous Goods of Packaging Group III, you may be required to license the premises or notify your Dangerous Goods authority. If you have any doubts, we suggest you contact your Dangerous Goods authority in order to clarify your obligations. Check packaging - there may be further storage instructions on the label.

**SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION**

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Industrial Clothing: **AS2919**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

**SWA Exposure Limits**                      **TWA (mg/m<sup>3</sup>)**                      **STEL (mg/m<sup>3</sup>)**

Exposure limits have not been established by SWA for any of the significant ingredients in this product.

The ADI for Lambda-cyhalothrin is set at 0.001mg/kg/day. The corresponding NOEL is set at 0.1mg/kg/day. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from Australian ADI List, April 2008.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

**Ventilation:** This product should only be used in a well ventilated area. If natural ventilation is inadequate, use of a fan is suggested.

**Eye Protection:** Eye protection such as protective glasses or goggles is recommended when this product is being used.

**Skin Protection:** Prevent skin contact by wearing impervious gloves, clothes and, preferably, apron. Make sure that all skin areas are covered. See below for suitable material types.

**Protective Material Types:** We suggest that protective clothing be made from the following materials: rubber, PVC.

**Respirator:** Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above. Otherwise, not normally necessary.

Safety deluge showers should, if practical, be provided near to where this product is being used.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES:**

**Physical Description & colour:** Beige coloured liquid.

**Odour:** No data.

**MATERIAL SAFETY DATA SHEET**

<b>Boiling Point:</b>	Not available.
<b>Freezing/Melting Point:</b>	No specific data. Liquid at normal temperatures.
<b>Volatiles:</b>	No data.
<b>Vapour Pressure:</b>	No data.
<b>Vapour Density:</b>	No data.
<b>Specific Gravity:</b>	Approx 1.1
<b>Water Solubility:</b>	Miscible.
<b>pH:</b>	No data. Expected to be neutral.
<b>Volatility:</b>	No data.
<b>Odour Threshold:</b>	No data.
<b>Evaporation Rate:</b>	No data.
<b>Coeff Oil/water Distribution:</b>	No data
<b>Autoignition temp:</b>	Not applicable - does not burn.

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## SECTION 10 - STABILITY AND REACTIVITY

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**Reactivity:** This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

**Conditions to Avoid:** Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

**Incompatibilities:** No particular Incompatibilities.

**Fire Decomposition:** Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Hydrogen chloride gas, other compounds of chlorine. Hydrogen fluoride gas and other compounds of fluorine. Water. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

**Polymerisation:** Polymerisation reactions are unlikely; they are not expected to occur.

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## SECTION 11 - TOXICOLOGICAL INFORMATION

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**Acute Toxicity, lambda-cyhalothrin:** Reported oral LD<sub>50</sub> values in corn oil are 79 mg/kg and 56 mg/kg for male and female rats, respectively. It has also been reported as 144 mg/kg. The reported rat LD<sub>50</sub> for the technical product is similar; 64 mg/kg. These indicate that the product is toxic by oral exposure. No data were available regarding the acute toxicity of the technical compound via the inhalation route, but for a formulated product, the reported 4-hour inhalation LC<sub>50</sub>s were 0.175 mg/L and 0.315 mg/L for female and male rats, respectively, indicating a moderate to high toxicity. Dermal LD<sub>50</sub>s of 632 mg/kg and 696 mg/kg have been reported for male and female rats (vehicle used was propylene glycol). It has also been found to be non-irritating to the skin of rabbits and non-sensitizing to the skin of guinea pigs but may cause mild eye irritation in rabbits. In formulated product however, it causes severe primary skin irritation in rabbits and mild skin sensitization in guinea pigs. Other acute effects due to exposure to lambda cyhalothrin, like those of other pyrethroids, will be mainly neuropathy (effects on the nervous system). These effects may result in observable effects such as: tingling, burning or numbness sensations (particularly at the point of skin contact); tremors, incoordination of movement, paralysis or other disrupted motor function; and confusion or loss of consciousness. Since most pyrethroids are generally absorbed only poorly through the skin, the latter two systemic effects are unlikely unless the compound has been ingested. Effects are generally reversible due to rapid breakdown of the compound in the body.

**Chronic Toxicity:** The principal toxic effects noted in chronic studies were decreased body weight gain and decreased food consumption. In two teratology studies, no maternal toxicity was observed at doses of 10 mg/kg/day in both rats and rabbits. It is unlikely that lambda cyhalothrin would cause chronic effects in humans under normal conditions.

**Reproductive Effects:** It is unlikely that lambda cyhalothrin would cause reproductive effects in humans under normal conditions.

**Teratogenic Effects:** No teratogenic or foetotoxic effects were observed in teratology studies of lambda cyhalothrin in rats and rabbits at the highest doses tested in both species. It is unlikely that lambda cyhalothrin causes teratogenic effects.

**Mutagenic Effects:** Lambda cyhalothrin produced negative results in all Ames mutagenicity assays using five different test strains, both with and without metabolic activation. The available evidence suggests that lambda cyhalothrin is non-mutagenic and non-genotoxic.

**Carcinogenic Effects:** The evidence regarding the carcinogenicity of lambda cyhalothrin is inconclusive, but suggests that it is probably not carcinogenic.

**Organ Toxicity:** No specific target organs or organ systems have been identified in the available studies of chronic toxicity. The nervous system may be affected after acute exposure.

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## Classification of Hazardous Ingredients

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Ingredient	Risk Phrases
Lambda-cyhalothrin	Conc>=25%: T+; R26; R25; R21

## MATERIAL SAFETY DATA SHEET

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**SECTION 12 - ECOLOGICAL INFORMATION**

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Very toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment. This product is biodegradable. It will not accumulate in the soil or water or cause long term problems.

**Effects on Birds:** Lambda cyhalothrin's toxicity to birds ranges from slightly toxic to practically non-toxic. There is evidence that it does not accumulate in the eggs or tissues of birds.

**Effects on Aquatic Organisms:** Lambda cyhalothrin is very highly toxic to many fish and aquatic invertebrate species. Bioconcentration is possible in aquatic species, but bioaccumulation is not likely. A bioconcentration factor of 858 has been reported in fish, but concentration was confined to non-edible tissues and rapid depuration was observed.

**Effects on Other Animals (Nontarget species):** Lambda cyhalothrin is highly toxic to bees, with a reported contact LD<sub>50</sub> of 0.9 µg/bee.

**ENVIRONMENTAL FATE**

**Breakdown of Chemical in Soil and Groundwater:** Lambda cyhalothrin is moderately persistent in the soil environment. Reported field half-lives range from 4 to 12 weeks. Its field half-life is probably close to 30 days in most soils.

**Breakdown of Chemical in Surface Water:** Lambda cyhalothrin has extremely low water solubility and is tightly bound to soil, it is therefore not expected to be prevalent in surface waters.

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**SECTION 13 - DISPOSAL CONSIDERATIONS**

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**Disposal:** Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 <http://www.chemclear.com.au/> and for help with the disposal of empty drums, contact DrumMuster <http://www.drummuster.com.au/> where you will find contact details for your area.

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**SECTION 14 - TRANSPORT INFORMATION**

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**ADG Code:** 3352, PYRETHROID PESTICIDE, LIQUID, TOXIC

**Hazchem Code:** 2X

**Special Provisions:** 61, 223, 274

**Limited quantities:** ADG 7 specifies a Limited Quantity value of 5 L for this class of product.

**Dangerous Goods Class:** Class 6.1: Toxic Substances.

**Packaging Group:** III

**Packaging Method:** P001, IBC03, LP01

Class 6 Toxic Substances shall not be loaded in the same vehicle or packed in the same freight container with Classes 1 (Explosives), 3 (Flammable Liquids where the Flammable Liquid is nitromethane), 5.1 (Oxidising Agents where the Toxic Substances are Fire Risk Substances), 5.2 (Organic Peroxides where the Toxic Substances are Fire Risk Substances), 8 (Corrosive Substances where the Toxic Substances are cyanides and the Corrosives are acids), Foodstuffs and foodstuff empties. They may however be loaded in the same vehicle or packed in the same freight container with Classes, 2.1 (Flammable Gases), 2.2 (Non-Flammable, Non-Toxic Gases), 2.3 (Toxic Gases), 3 (Flammable liquids, except where the flammable liquid is nitromethane), 4.1 (Flammable Solids), 4.2 (Spontaneously Combustible Substances), 4.3 (Dangerous When Wet Substances), 5.1 (Oxidising Agents except where the Toxic Substances are Fire Risk Substances), 5.2 (Organic Peroxides except where the Toxic Substances are Fire Risk Substances), 7 (Radioactive Substances), 8 (Corrosive Substances except where the Toxic Substances are cyanides and the Corrosives are acids), 9 (Miscellaneous Dangerous Goods)

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**SECTION 15 - REGULATORY INFORMATION**

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**AICS:** All of the significant ingredients in this formulation are compliant with NICNAS regulations.

The following ingredient: Lambda-cyhalothrin, is mentioned in the SUSDP.

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**SECTION 16 - OTHER INFORMATION**

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**This MSDS contains only safety-related information. For other data see product literature.**

**Acronyms:**

<b>ADG Code</b>	Australian Code for the Transport of Dangerous Goods by Road and Rail (7 <sup>th</sup> edition)
<b>AICS</b>	Australian Inventory of Chemical Substances
<b>SWA</b>	Safe Work Australia, formerly ASCC and NOHSC
<b>CAS number</b>	Chemical Abstracts Service Registry Number
<b>Hazchem Code</b>	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
<b>IARC</b>	International Agency for Research on Cancer
<b>NOS</b>	Not otherwise specified

**MATERIAL SAFETY DATA SHEET**

**NTP**  
**R-Phrase**  
**SUSDP**  
**UN Number**

National Toxicology Program (USA)  
Risk Phrase  
Standard for the Uniform Scheduling of Drugs & Poisons  
United Nations Number

This MSDS summarises our best knowledge of the health and safety hazard information on 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 Imtrade Australia Pty Ltd, or in the event of an emergency, 000. 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.

Please read all labels carefully before using product.

This MSDS is prepared in accord with the SWA document "National Code of Practice for the Preparation of Material Safety Data Sheets" 2nd Edition [NOHSC:2011(2003)]

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End of Report

**MATERIAL SAFETY DATA SHEET**