

# Material Safety Data Sheet

## According to 91/155 EC

Printing date: 13.05.2010

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### **1 Identification of substance**

\* Product details:  
\* Trade name: TYRA-Flora  
\* Article number: TYR1512  
\* Manufacturer/Supplier: Sanit & Sons Co.,Ltd.  
3587/7 Soi Pradoo 1 Charoen Krung Road,  
Bangklo, Bangkorlaem Bangkok 10120, Thailand

### **2 Composition/Data on components**

\* Chemical characterization Mixture of Pyrethroides in aliphatic solvents

#### **CAS N° Description**

* Identification number(s)	52645-53-1	permethrine	Xn;N;R22/52-53	1-10%
	8003-34-7	pyrethrines	N;R50/53	1-10%
	51-03-6	PBO	N;R50/53	1-10%
	90622-58-5	isoalcanes	Xn;R65	9-70%

### **3 Hazards identification**

\* Hazard description: Xn Harmfull  
N Dangerous for the environment

\* Information pertaining to particular dangers for man and environment:  
R 10 flammable  
R51/53 Toxic to aquatic organism, may cause long-term adverse effects in the aquatic environment  
R65 Harmful: may cause lung damage if swallowed

### **4 First aid measures**

\* General information: Immediately remove any clothing soiled by the product

\* After inhalation: Supply fresh air; consult doctor in case of complaints

\* After skin contact: Immediately rinse with water; if skin irritation continues, consult doctor

\* After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor

\* After swallowing: Do not induce vomiting; call for medical help immediately

## **5 Fire fighting measures**

- \* Suitable extinguishing agents:** CO2 extinguishing powder or water spray. Fight larger fires with spray or alcohol resistant foam
- \* For safety reasons unsuitable extinguishing agents:** Water with full jet
- \* Protective equipment:** Mount respiratory protective device

## **6 Accidental release measures**

- \* Person-related safety precautions:** Wear protective clothing, ensure adequate ventilation
- \* Measures for environmental protection:** Do not allow to enter sewers/surface or ground water. Prevent from spreading
- \* Measures for cleaning/collecting:** Absorb liquid components with liquid binding material. Send for recovery or disposal in suitable receptacles

## **7 Handling and storage**

- \* HANDLING:**
- \* Information for safe handling:** Ensure good ventilation/exhaustion at the workplace. Open and handle receptacles with care; prevent formation of aerosols
- \* Information about protection against explosions and fire:** Keep ignition source away; do not smoke. Protect against electrostatic charges.
- \* STORAGE**
- \* Requirements to be met by storerooms and receptacles:** Store in a cool location
- \* Information about storage in on common storage facility:** Do not store together with human or animal food
- \* Further information about storage conditions:** Keep receptacles tightly sealed
- \* STORAGE CLASS:**
- \* Class according to regulation on flammable liquids** \*

## **8 Exposure controls and personell protection**

- \* **Additional information about design of technical systems:** No further data; see item 7
- \* **Components with limit values that require monitoring at the workplace:** Not required
- \* **Additional information:** The lists that were valid during the creation were used as basis
- \* **Personal protective equipment:**
- \* **General protective and hygienic measures:** Keep away from foodstuffs, beverages and feed. Store protective clothing seperately. Avoid close or long term contact with skin. Do not inhale gases/ fumes/aerosols
- \* **Breathing equipment:** Use respiratory protective device when high concentrations are present
- \* **Protection of hands:** Protective gloves
- \* **Eye protection:** Safety glasses

## **9 Physical and chemical properties**

- \* **Form:** liquid
- \* **Colour:** yellowish
- \* **Odour:** solvents/flowers

	<u>Value Range</u>	<u>Unit</u>	<u>Method</u>
* <b>Change in contition:</b>			
* <b>Melting point / Melting range:</b>	<-20	°C	DIN 51761
* <b>Boiling point / Boiling range:</b>	90-220	°C	DIN 51761
* <b>Flash point:</b>	>80	°C	DIN 51794
* <b>Ignition temperature:</b>	>200	°C	DIN 51794
* <b>Explosion limits:</b>			
* <b>Lower:</b>	0,6	vol-%	
* <b>Upper:</b>	12	vol-%	
* <b>Vapour pressure:</b>	42 at 20°C		DIN 51754
* <b>Density:</b>	847 at 20°C		DIN 51757

\* **Solubility in/Miscibility with:**  
 \* **Water:** emulsifying  
 \* **pH-value:** 7+/-0.5 at 10 %  
 \* **Refraction indice (20°C)**  
 \* **Viscosity:**  
 \* **cinematic:** 1.7 at 20°C mm<sup>2</sup>/s

## **10 Stability and reactivity**

\* **Thermal decomposition conditions to be avoided:** No decomposition if used and stored according to specifications  
 \* **Dangerous reactions:** No dangerous reaction known  
 \* **Dangerous products of decomposition:** No dangerous decomposition product known

## **11 Toxicological information**

\* **Acute toxicity:**  
LD/LC50 values that are relevant for classification:  
 Oral: LD50>5'000 mg/kg bodyweight (rat)  
 Skin: LD50>2'000 mg/kg bodyweight (rabbit)  
 Inhalation: LC50/4h: 3'400 to 5'500 mg/lit (rat)  
 \* **Primary irritant effect:**  
 \* **On the skin:** no irritant effect  
 \* **On the eye:** no irritant effect  
 \* **Sensitization:** no sensitizing effects known

## **12 Ecological information**

\* **Other information:** Dangerous for the aquatic environment the product is hardly biodegradable  
 \* **Aquatic toxicity:**  
 \* **General information:** Water hazard class 2.  
 Do not allow to enter sewers/surface or ground water

## **13 Disposal considerations**

\* **Product:**  
 \* **Recommendation:** Does not be disposed of together with household garbage. Do not allow product to reach sewage system

\* **Uncleaned packagings:**  
\* **recommendation:** **Disposal to be conducted according to official regulations**

\* **Recommended cleansing agent:**

## **14 Transport information**

\* **Land transport ADR/RID (cross border)**  
\* **ADR/RID class:** **3**  
\* **Item:** **31c**  
  
\* **Danger code (Kemler):** **30**  
\* **UN Number:** **1993**  
  
\* **Description of goods:** **Concentrated emulsifiable insecticide**

\* **Maritime transport IMDG:**  
\* **IMDG Class:** **3.3**  
\* **Page:** **3375**  
\* **UN Number:** **1993**  
\* **Packaging group:** **III**  
\* **EMS Number:** **3-07**  
\* **Propper shipping name:** **Concentrated emulsifiable insecticide**

\* **Air transport ICAO-TI and ATA-DGR:**  
\* **ICAO/IATA Class:** **3**  
\* **UN/ID Number:** **1993**  
\* **Packaging group:** **III**  
\* **Propper shipping name:** **Concentrated emulsifiable insecticide**

## **15 Regulations**

\* **Markings according to EU guidelines:** **The product has been classified and marked in accordance with EU directives/ordinance on hazardous material**

\* **Code letter and hazard designation of product** **Xn Harmful  
N Dangerous for the environment**

\* **Risk phrases:** **10 flammable  
51/53 toxic to aquatic organism, may cause long-term adverse effects in the aquatic environments  
65 Harmful: may cause lung damage if swallowed**

**\* Safety phrases:**

**2** keep out of reach of children  
**23** do not inhale gases/fumes and aerosols  
**24** avoid contact with the skin  
**43** in case of fire use water  
**57** use suitable receptacles in order to avoid environment contamination  
**60** this material and its container must be disposed of as hazardous waste  
**61** Do not allow to enter the environment. Follow the special instructions of the MSDS  
**62** If swallowed, do not induce vomiting; seek medical advice immediately and show the container or label

**\* National regulations:**

**Swiss Legislation**  
**OFSP T. / BAG T.: cosmetic**  
**Class of toxicity: 0 (free)**

**\* Classification according to VbF:**

**A II**

**\* Technical instructions (air):**

**Class Share in %**

**III 50 to 100 %**

**\* Water hazard class:**

**Class 2: dangerous to aquatic environment**

**16 Other informations**

**This information is based on present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.**

**\* Department issuing MSDS:**

**Laboratory**