

SAFETY DATA SHEET

Date Revised: 05 January 2018

SECTION 1 IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND THE COMPANY

Product Name: Tiger Brand Adhesive 66

Application: General purpose contact adhesive for wood, rubber, leather and metal products.

Company: Asia Adhesive Manufacturer Pte Ltd
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SECTION 2 HAZARDS IDENTIFICATION**Hazard Statement**

- Highly flammable liquid
- Harmful if swallowed (oral)
- Harmful in contact with skin (dermal)
- Harmful if inhaled (vapour)
- Causes skin irritation
- Causes serious eye irritation
- May cause damage to organs
- Toxic to aquatic life
- Toxic to aquatic life with long lasting effects

**Classification System**

The hazards classification is accordance with the latest editions of GHS classification and labeling ST/SG/AC.10/30/Rev.2, and based on data from the company and the literature.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS #	% w/w	Hazards Classification
Light aliphatic petroleum solvent	N.A.	10 - 40	F, Xi, Xn, N, R11, R38, R48/20, R62, R65, R67, R51/53
Toluene	108-88-3	10 - 25	Xn, F, R11, R38, R48/20, R63, R65, R67
Synthetic Rubber	9010-98-4	10 - 30	-
Ethyl Acetate	141-78-6	7 - 13	F, Xi, R11, R36, R66, R67
Resin	N.A.	5 - 10	Xi, N, T, R36/37/38, R51/53, R23/23/25, R34, R40, R43
Zinc Oxide	1314-13-2	0.1 - 1	N, R20, R36, R37

SECTION 4 FIRST AID MEASURES**General Information**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After Inhalation

If unconscious or overcome by vapors, remove patient to fresh air. Place patient stably in a side position for transportation. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call for doctor.

After Skin Contact

Immediately wash with water and soap, and rinse thoroughly. Cover the irritated skin with an emollient. In case of serious skin contact, wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

After Eye Contact

Immediately rinse opened eyes for at least 15 minutes under running water. Then consult a doctor.

After Swallowing/Ingestion

Do not induce vomiting, rinse mouth with water and call for a doctor immediately.

SECTION 5 – FIRE-FIGHTING MEASURES

- **Flammability**
Highly flammable.
- **Fire hazards in the presence of various substances**
Flammable in the presence of open flames and sparks of heat.
- **Suitable extinguishing agents**
Small fire: Dry chemical powder, CO₂, foam.
Large fire: evacuate area and call fire department.
Use fire fighting measures that suit the environment.
- **Protective equipment**
Mount respiratory protective device.
- **Special remarks on fire hazards**
When heated to decomposition it emits acrid smoke and irritating fumes.
Vapor may travel considerable distance to source of ignition and flash back.
- **Special remarks on explosion hazards**
Forms explosive mixtures with air at ambient temperatures.
- **Other Information**
Do not stay in dangerous zone without self-contained breathing apparatus.
Keep a safety distance and wear suitable protection clothing to avoid contact with skin.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

- **Person-related safety precaution**
Use proper personal protective equipment
- **Measures for environmental protection**
Prevent seepage into sewage system, worksites and cellars.
Do not allow to enter sewers/surface or ground water.
- **Measures for cleaning/collecting**
Small spill:
Remove all ignition sources.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust) and put in a flammable waste container.
Dispose of contaminated material as waste following instruction in Section 13.
Ensure adequate ventilation.
Large spill:
Evacuate the area and move people upwind.
Alert Fire Brigade and inform the location and nature of hazard.
Keep away from heat and sources of ignition.
Increase ventilation until it becomes solid-like waste.
Absorb the waste with sand, earth or vermiculite and collect and seal in flammable waste container.
Wash area and prevent runoff into drains. If contamination of drains or waterways occurs, inform local environmental protection agency.
Dispose of contaminated material as waste following instruction in Section 13.

SECTION 7 – HANDLING AND STORAGE**Handling**

- **Information for safe handling**
Ensure good ventilation/exhaust system at the workplace.
Do not inhale fumes/vapor/spray.
Avoid generation of vapors/aerosols.
Wash thoroughly after handling.
- **Information about protection against explosions and fires**
Keep away from heat and sources of ignition.
Take measures to prevent electrostatic charging.

Storage

- **Requirements to be met by storerooms and receptacles**
Tightly closed in a cool and well ventilated place.
Keep away from sources of ignition and heat.
Avoid all possible sources of ignition (spark or flame).
- **Further information about storage conditions**
Keep container tightly closed and sealed until ready for use.
Keep away from incompatibles such as oxidizing agents, acids and alkalis.
- **Packing group**
Flammable liquids: II

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION• **Specific control parameter**

EC

Name Ethyl Acetate (141-78-6)
 Value 400 ml/m³
 1400 ml/m³

Name Toluene (108-88-3)
 Value 50 ml/m³
 192 ml/m³

Embryotoxic R(E) 3: cause concern to humans owing to possible developmental toxic effects.
 Skin resorption Risk of skin absorption

• **General protective and hygienic measures**

Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing.
 Wash hands and face before breaks and at the end of the work.
 Work under hood. Do not inhale substance.

• **Personal protective equipment****Breathing equipment**

In case of brief exposure or low pollution, use respiratory filter device.
 In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Protection of hands

Wear Nitrile or PVC coated protective gloves. The protective gloves used must comply with the specification of EC directive 89/686/EEC and the resultant standard EN374.

Eye protection

Protective goggles required during handling.

Protection clothing

Flame-proof protective and antistatic protective clothing.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

- Form: Viscous fluid
- Color: Yellowish
- Odor: Solvent
- Flash point: 7±1°C (PMC)
- Initial Boiling Point: 75°C based on first boiling point component (PEGASOL 1425)
- Density: 0.91 ± 0.02 g/ml
- Solubility: in water: <0.4%
in IPA: <0.4%
- Percent Volatiles: 69-71% w/w
- Evaporate Rate: Faster than water

SECTION 10 – STABILITY AND REACTIVITY• **Stability**

Stable in the tightly closed container under normal temperature and pressure, heating and spark to be avoided.

• **Thermal decomposition/conditions to be avoided**

Risk of ignition or formation of inflammable gases or vapors.
 Risk of exothermic reaction with oxidizing agents, such as Nitrate, chloroform, alkali hydroxides.

• **Dangerous reactions**

Violent reactions possible with: strong oxidizing agents, strong acids.
 Risk of reaction with oxidizing agents such as Nitric acid, concentrated Sulfuric acid, Silver Perchlorates, Sodium Difluoride, Tetranitromethane, Uranium Hexafluoride, Frozen Bromine, Trifluoride, Nitrates, Chlorosulfonic acid, Oleum, Potassium-tert-Butoxide, and Lithium Tetrahydroaluminate. Chemical reacts with Nitrogen oxides and Halogens to form Nitrotoluene, Nitrobenzene, and Nitrophenol and Halogenated products.

• **Dangerous products of decomposition**

Decomposition products as carbon dioxides, carbon monoxide, hydrogen chloride gas, peroxides, etc.

• **Further information**

Unstable working materials: various plastics.
 Moisture sensitive: On storage, it is slowly decomposed by water.

SECTION 11 – TOXICOLOGICAL INFORMATION

1. Acute oral toxicity:
LD50 is estimated to be 1643 mg/kg (rat)
2. Acute dermal toxicity:
LD50 is estimated to be 14100 mg/kg (rabbit)
3. Acute inhalation toxicity:
LC50 is estimated to be 28.1 mg/l/4hr (rat)
A few sources claim that finely divided zinc oxide dust can cause "metal fume fever".
4. Skin contact:
Cause skin irritations
5. Eye contact:
Cause eye irritations
6. Sensitization:
No data available
7. Subchronic/chronic toxicity:
Detected in maternal milk in human. Passes through the placental barrier in human. Embryotoxic and/or foetotoxic in animal. May cause adverse reproductive effects and birth defects (teratogenic). May cause damage to the following organs: blood, kidney, the nervous system, liver, brain, central nervous system (CNS)
8. Mutagenicity:
May affect genetic material (mutagenic).
9. Other toxicological information:
After inhalation: irritation symptoms in the respiratory tract, headache, drowsiness, dizziness. A few sources claim that finely divided zinc oxide dust can cause "metal fume fever".
After uptake of large quantities: pneumonia, respiratory paralysis
After long-term exposure to the chemical: dermatitis. Degreasing effect on the skin, possibly followed by secondary inflammation. Danger of skin absorption.
After swallowing: nausea and vomiting. Risk of aspiration upon vomiting. Absorption.
Systemic effects: after absorption of large quantities: Central nervous system disorders, inebriation, spasms, unconsciousness, respiratory arrest, cardiovascular failure, death

SECTION 12 – ECOLOGICAL INFORMATION

1. Abiotic degradation:
No data available
2. Biologic degradation:
No data available
3. Behavior in environmental compartments:
Toluene (CAS#108-88-3): Distribution: log Pow: 2.65
No appreciable bioaccumulation potential is to be expected (log Pow 1-3)
4. Ecotoxic effects:
Toluene (CAS#108-88-3): Fish toxicity: *Onchorhynchus mykiss* LC50 = 5.8 mg/l/96 hr
Daphnia toxicity: *D. magna* EC50 = 6 mg/l/48 hr
Algae toxicity: *Selenastrum capricornutum* IC50 = 12 mg/l/72 hr
Protozoa toxicity: *E. sulcatum* NOEC = 456 mg/l/72 hr

Ethyl acetate (CAS#141-78-6): Fish toxicity: Fathead minnow LC50 = 220 mg/L/96 hr
Indian catfish LC50 = 212.5ppm/96 hr
5. Further ecologic data:
Toluene (CAS#108-88-3): TOD = 3.13 g/g

The chemical mixture is not allowed to enter water, waste water or soil.

SECTION 13 – DISPOSAL CONSIDERATIONS

- **Product**
Must be disposed of in compliance with the respective national regulations.
Must not be disposed of together with household garbage.

Do not allow product to reach sewage system.

- **Packaging**
Must be completely rained and safely stored until appropriately reconditioned or disposed.
Must be disposed in compliance with the country-specific regulations.
- **Recommendation**
Disposal must be made according to official regulations.

SECTION 14 – TRANSPORT INFORMATION

Land transport ADR/RID (Cross –border)

- ADR/RID class: UN 1133, Adhesives containing flammable liquid, 3 II -

Maritime transport IMDG

- IMDG Class: UN Adhesives containing flammable liquid, 3 II -
- Ems F-E S-D

Air transport CAO PAX

- UN 1133 Adhesives containing flammable liquid, 3 II -

SECTION 15 – REGULATORY INFORMATION

- **Marking**
The product has been classified and marked in accordance of EU Directives/Ordinance on Hazardous Materials
- **Code letter and hazard designation of labeling**
F Highly flammable
Xn Harmful
Xi Irritant
N Toxic to environment
- **Hazard-determining components of labeling**
Ethyl Acetate
Toluene
Pegasol 1425
- **Risk phrases**
R11-20-22-36/37-38-48-62-63-65-66-67
Highly Flammable (Flame Category 2, highly flammable liquid, Danger)
Harmful by inhalation and swallowed. Irritating to eyes and to skin.
Danger of serious damage to health by prolonged exposure through inhalation.
Possible risk of harm to the unborn child. Harmful: may cause lung damage if swallowed.
Repeated exposure may cause skin dryness or cracking.
Vapors may cause drowsiness and dizziness.
- **Safety phrases**
S2-9-16-24-25-36-37-46-62
Keep out of the reach of children. Keep container in a well-ventilated place.
Avoid contact with eyes and skin. Keep away from sources of ignition. No smoking.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advices. Wear suitable protective clothing and gloves. If swallowed, do not induce vomiting, seek medical advice immediately and show this container or label.
- **Water hazard class**
Water hazard class 1 (self-assessment): hazardous for water.
R-phrases and S-phrases are according to European Union Directive 671/548/EEC.

SECTION 16 – OTHER INFORMATION

The above information has been compiled from sources currently available to us and believed to be reliable to the best of our knowledge. It is intended only as a guide to the appropriate handling of the product by a properly trained person. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse are beyond control of the supplier, no warranty is expressed or implied with respect to the completeness or continuing accuracy of the information contained herein. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practises. The above information is furnished on conditions that the users shall determine the appropriateness of the information for their purpose and assume the risk of their use.