1. COMPANY AND PRODUCT IDENTIFICATION

Product Name	:	SOLVERA JT16
Substance Name	:	normal paraffin C16, 99 wt% min
Application Uses	:	Bio-based Solvent, Phase-changed material
Company Name	:	Verasuwan Company Limited
Company Address	:	53/2, 53/8 Moo 5, Setthakij 1 Road, Nadee, Muang Samutsakorn 74000, Thailand
E-mail	:	verasuwan@gmail.com
Emergency Telephone	:	(+66)-34-468-801, (+66-81-403-2723)

2. HAZARDS INDENTIFICATION

Emergency Overview

OSHA Hazards

No known OSHA hazards

GHS Classification

Acute toxicity, Dermal (Category 5)

Aspiration hazard (Category 1)

GHS Label elements, including precautionary statement

Pictogram :

Signal word : Danger

Hazard statement(s)

H304	May be fatal if swallowed and enters airways.
H313	May be harmful in contact with skin.

Precautionary statement(s)

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician
P331	Do NOT inducing vomiting.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

Other hazards

Repeated exposure may cause skin dryness or cracking.

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

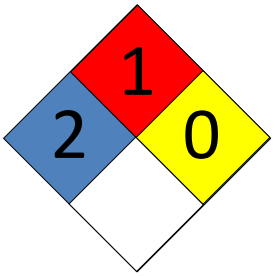
HMIS Classification

Health hazard: 2

Flammability: 1

Physical hazards: 0

NFPA Rating



Health hazard:	2
Fire:	1
Reactivity Hazard:	0
Specific Hazard:	NONE

Potential Health Effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.
Ingestion	May be harmful if swallowed. Aspiration hazard if swallowed can enter lungs and cause damage.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Synonyms	:	Hexadecane
Formula	:	$C_{16}H_{34}$
Molecular weight	:	226.44 g/mol

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Concentration
Hexadecane	
CAS-No. 544-76-3 EC-No. 208-878-9	<= 100 %

4. FIRST AID MEASURES

Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Indication of any immediate medical attention and special treatment needed

No data available

5. FIRE FIGHTING MEASURES

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers

which are opened must be carefully resealed and kept upright to prevent leakage. Hygroscopic substance please handle and store under inert gas.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineer protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Full and Splash Contact

Material: Nitrile Rubber minimum layer 0.4 mm, breakthrough time 8 h.

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body Protection

Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

Form	Clear Liquid
Colour	Colourless

Safety data

Odour	Odourless
Odour Treshold	No data available
pH	No data available
Melting point/freezing point	18 – lit.
Initial boiling point and boiling range	287 °C - lit.
Flash point	135 °C - closed cup
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	0.003 mmHg at 20 °C
	0.75 mmHg at 105.3 °C
Vapour density	7.82 (Air = 1.0)
Relative density	0.773 g/cm3 at 25 °C
Water solubility	Insoluble
Partition coefficient: n-octanol/water	log Pow: 8.2 at 25 °C
Auto-ignition temperature	205 ^{o}C
Decomposition temperature	No data available
Viscosity	4.29 mm^2/s (20 °C)
Explosive properties	No data available
Oxidizing properties	No data available

10. STABILITY AND REACTIVITY

Reactivity	No data available
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No data available
Conditions to avoid	No data available
Incompatible materials	Strong oxidizing agents
Hazardous decomposition products	Carbon monoxide (CO), Carbon dioxide (CO_2)

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

LD50 Oral - Rat	> 5.000 mg/kg (OECD Test Guideline 401)
LD50 Dermal - Rabbit	> 3.160 mg/kg (OECD Test Guideline 402)
TDLo Intraperitoneal - Mouse	1.546 mg/kg Remarks: Liver:Changes in liver weight.
LDLO Intravenous - Mouse	9.821 mg/kg Remarks: Behavioral:Altered sleep time (including change in righting reflex).

Skin corrosion/irritation	No skin irritation
Serious eye damage/eye irritation	No eye irritation
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	No data available

Carcinogenicity

IARC : No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity — Do NOT empty into drains.

Toxicity

Toxicity to fish — LC50 - other fish - > 1,028 mg/l - 96 h
(OECD Test Guideline 203)

Persistence and degradability — No data available

Biodegradability — Readily biodegradable (OECD Test Guideline 306)

Bio-accumulative potential — Salmo salar (Atlantic salmon) - 7 d - 1700 µg/l(Hexadecane)
Bioconcentration factor (BCF): 5.6

Mobility in soil — No data available

Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bio-accumulative and toxic (PBT), or very persistent and very bio-accumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects — No data available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

UN number

ADR/RID: - IMDG: - IATA: -

UN proper shipping name

ADR/RID: Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods

Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

Packaging group

ADR/RID: - IMDG: - IATA: -

Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

Special precautions for user

No data available

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Chemical safety assessment

For this product a chemical safety assessment was not carried out

16. Other Information

Full text of H-Statements referred to under sections 2 and 3.

H304	May be fatal if swallowed and enters airways.
H313	May be harmful in contact with skin.