



**Safety Data Sheet  
according to WHS Regulations**

Printing date 10.01.2024

Version number 5

Revision: 10.01.2024

Hazardous according to criteria of Australian Safety and Compensation Council.

## 1 Identification

· **Product identifier**

· Trade name: **Signum Insulating pen II**

· **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.

· **Application of the substance / the mixture** Auxiliary for manufacture of dental prothesis

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**  
Kulzer Australia Pty Ltd  
Unit 20, 53 Lorraine St  
PEAKHURST NSW 2210  
Australia

Tel: +61 (02) 9153 0311

· **Informing department:** see above

· **Emergency telephone number:**  
Poison Information Number: Australia 13 11 26 & New Zealand 0800 764 766

## 2 Hazard(s) Identification

· **Classification of the substance or mixture**

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

Skin Irrit. 2 H315 Causes skin irritation.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT SE 3 H336 May cause drowsiness or dizziness.

STOT RE 2 H373 May cause damage to the nervous system through prolonged or repeated exposure.  
Route of exposure: Inhalation.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

· **Label elements**

· **GHS label elements**

The product is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**

Naphtha (petroleum), hydrotreated light [P: < 0,1 % w/w benzene (EC: 200-753-7)]

n-hexane

Stoddard solvent

cyclohexane

· **Hazard statements**

Highly flammable liquid and vapour.

Causes skin irritation.

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*Suspected of damaging fertility or the unborn child.*

*May cause drowsiness or dizziness.*

*May cause damage to the nervous system through prolonged or repeated exposure. Route of exposure: Inhalation.*

*May be fatal if swallowed and enters airways.*

**· Precautionary statements**

*Keep away from heat/sparks/open flames/hot surfaces. No smoking.*

*Avoid breathing mist/vapours/spray.*

*Avoid release to the environment.*

*Wear protective gloves / eye protection.*

*Wear protective clothing.*

*In case of inadequate ventilation wear respiratory protection.*

*IF ON SKIN: Wash with plenty of soap and water.*

*Get medical advice/attention if you feel unwell.*

*If skin irritation or rash occurs: Get medical advice/attention.*

**· Other hazards -**

**· Results of PBT and vPvB assessment**

**· PBT:** Not applicable.

**· vPvB:** Not applicable.

**3 Composition and Information on Ingredients**

**· Chemical characterisation: Mixtures**

**· Description: -**

**· Dangerous components:**

64742-49-0	Naphtha (petroleum), hydrotreated light [P: < 0,1 % w/w benzene ( EC: 200-753-7)] Flam. Liq. 2, H225 Repr. 2, H361f; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336	≥25-≤75%
110-54-3	n-hexane Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 Specific concentration limit: STOT RE 2; H373: C ≥ 5 %	≥25-≤50%
110-82-7	cyclohexane Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336	≥5-<10%
8052-41-3	Stoddard solvent Flam. Liq. 3, H226 STOT RE 1, H372; Asp. Tox. 1, H304 Skin Irrit. 2, H315	≥0-≤5%

**· Additional information** For the wording of the listed hazard phrases refer to section 16.

**4 First Aid Measures**

**· After inhalation** Supply fresh air; consult doctor in case of symptoms.

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- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing**  
Rinse out mouth and then drink plenty of water.  
In case of persistent symptoms consult doctor.
- **Information for doctor**
  - **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
  - **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire Fighting Measures

- **Suitable extinguishing agents** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents** Water.
- **Special hazards arising from the substance or mixture**  
Can form explosive gas-air mixtures.  
Formation of toxic gases is possible during heating or in case of fire.
- **Protective equipment:** No special measures required.
- **Additional information** -

### 6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Inform respective authorities in case product reaches water or sewage system.  
Prevent material from reaching sewage system, holes and cellars.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (diatomite, universal binders, for small amounts tissues).  
Dispose of contaminated material as waste according to item 13.  
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**  
No dangerous materials are released.  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.  
-

### 7 Handling and Storage

- **Handling**
  - **Precautions for safe handling**  
Keep containers tightly sealed.  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
  - **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.

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- *Protect against electrostatic charges.*
- **Storage**
  - **Requirements to be met by storerooms and containers:** Store in cool location.
  - **Information about storage in one common storage facility:** Not required.
  - **Further information about storage conditions:**  
Store in cool, dry conditions in well sealed containers.
- **Specific end use(s)** No further relevant information available.

**8 Exposure controls and personal protection**

- **Additional information about design of technical systems:** No further data; see section 7.

- **Components with critical values that require monitoring at the workplace:**

**110-54-3 n-hexane**

WES (Australia)	Long-term value: 72 mg/m <sup>3</sup> , 20 ppm
PEL (USA)	Long-term value: 1800 mg/m <sup>3</sup> , 500 ppm
REL (USA)	Long-term value: 180 mg/m <sup>3</sup> , 50 ppm
TLV (USA)	Long-term value: 176 mg/m <sup>3</sup> , 50 ppm Skin; BEI

**110-82-7 cyclohexane**

WES (Australia)	Short-term value: 1050 mg/m <sup>3</sup> , 300 ppm Long-term value: 350 mg/m <sup>3</sup> , 100 ppm
PEL (USA)	Long-term value: 1050 mg/m <sup>3</sup> , 300 ppm
REL (USA)	Long-term value: 1050 mg/m <sup>3</sup> , 300 ppm
TLV (USA)	Long-term value: 344 mg/m <sup>3</sup> , 100 ppm

**8052-41-3 Stoddard solvent**

WES (Australia)	Long-term value: 790 mg/m <sup>3</sup>
PEL (USA)	Long-term value: 2900 mg/m <sup>3</sup> , 500 ppm
REL (USA)	Long-term value: 350 mg/m <sup>3</sup> Peak limitation: 1800* mg/m <sup>3</sup> *15-min
TLV (USA)	Long-term value: 525 mg/m <sup>3</sup> , 100 ppm

**· DNELs**

**8052-41-3 Stoddard solvent**

Oral	general population, long term, systemic	10.56 mg/Kg (not defined)	
	Dermal	worker industrial, acute, systemic	30 mg/Kg/d (not defined)
		worker industrial, long term, systemic	80 mg/Kg/d (not defined)
		worker industrial, long term, local	7.56 mg/Kg/d (not defined)
		general population, acute, systemic	60 mg/Kg/d (not defined)
Inhalative	general population, long term, systemic	40 mg/Kg/d (not defined)	
	general population, long term, local	3.78 mg/Kg/d (not defined)	
	worker industrial, acute, systemic	55 mg/m <sup>3</sup> (not defined)	
	worker industrial, acute, local	55 mg/m <sup>3</sup> (not defined)	

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worker industrial, long term, systemic	44 mg/m3 (not defined)
worker industrial, long term, local	44 mg/m3 (not defined)
general population, acute, systemic	55 mg/m3 (not defined)
general population, acute, local	55 mg/m3 (not defined)
general population, long term, systemic	22 mg/m3 (not defined)
general population, long term, local	22 mg/m3 (not defined)

**· PNECs**

**8052-41-3 Stoddard solvent**

freshwater	0.14 mg/l (not defined)
marine water	0.35 mg/l (not defined)
sediment, dry weight, freshwater	1.14 mg/Kg (not defined)
sediment, dry weight, marine water	0.14 mg/Kg (not defined)

**· Ingredients with biological limit values:**

**110-54-3 n-hexane**

BEI (USA)	0.4 mg/L
Medium:	urine
Time:	end of shift at end of workweek
Parameter:	2.5-Hexanedione without hydrolysis

· **Additional information:** The lists that were valid during the compilation were used as basis.

**· Personal protective equipment**

**· General protective and hygienic measures**

Keep away from foodstuffs, beverages and food.  
Instantly remove any soiled and impregnated garments.  
Wash hands during breaks and at the end of the work.  
Avoid contact with the eyes and skin.

**· Breathing equipment:**

Not necessary with efficient local exhaust. If exposition to vapours is possible, use breathing protective mask (filter A).

**· Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Use protective gloves, if skin contact cannot be avoided.

Solvent resistant gloves

Check protective gloves prior to each use for their proper condition.

recommended

**· Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**· Penetration time of glove material**

Value for the permeation: Level  $\leq 2$

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The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**  
Butyl rubber, BR  
Nitrile rubber, NBR
- **Eye protection:** Tightly sealed safety glasses.
- **Body protection:** Light weight protective clothing

## 9 Physical and Chemical Properties

- **General Information**
  - **Appearance:**
    - **Form:** Liquid on inert carrier material
    - **Colour:** Colourless
  - **Smell:** Benzen-like
  - **Odour threshold:** Not determined.
- **pH-value at 20 °C:** 7
- **Change in condition**
  - **Melting point/freezing point:** Not determined
  - **Initial boiling point and boiling range:** 69 °C
- **Flash point:** -22 °C
- **Inflammability (solid, gaseous)** Not applicable.
- **Auto-ignition temperature:** 240 °C
- **Decomposition temperature:** Not determined.
- **Self-inflammability:** Product is not selfigniting.
- **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures is possible.
- **Critical values for explosion:**
  - **Lower:** 1.2 Vol %
  - **Upper:** 7.4 Vol %
- **Steam pressure at 20 °C:** 160 hPa
- **Density at 20 °C** 0.7 g/cm<sup>3</sup>
  - **Relative density** Not determined.
  - **Vapour density** Not determined.
  - **Evaporation rate** Not determined.
- **Solubility in / Miscibility with**
  - **Water:** Not miscible or difficult to mix
- **Partition coefficient: n-octanol/water:** Not determined.
- **Viscosity:**
  - **dynamic:** Not determined.
  - **kinematic at 40 °C:** < 20.5 mm<sup>2</sup>/s
- **Solvent content:**
  - **Solids content:** 9.7 %
- **Other information** No further relevant information available.

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**10 Stability and Reactivity**

- **Reactivity** No further relevant information available.
- **Conditions to be avoided:** No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** None
- **Additional information:** -

**11 Toxicological Information**

- **Information on toxicological effects**
  - **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values that are relevant for classification:**

**64742-49-0 Naphtha (petroleum), hydrotreated light [P: < 0,1 % w/w benzene ( EC: 200-753-7)]**

Oral	LD50	>5,000 mg/kg (rat) (OECD 401)
Dermal	LD0	>2,000 mg/kg (rabbit) (OECD 402)
Inhalative	LC0/4h	>5,610 mg/L (rat) (OECD 403)

**110-54-3 n-hexane**

Oral	LD50	16,000 mg/kg (rat) (OECD 401)
Dermal	LD0	3,350 mg/kg (rabbit) (OECD 402)
Inhalative	LC50/4 h	259.354 mg/l (rat) (OECD 403)

**110-82-7 cyclohexane**

Oral	LD50	>5,000 mg/kg (rat) (OECD 401)
Dermal	LD0	>2,000 mg/kg (rabbit) (OECD 402)
Inhalative	LC0/4h	>328.8 mg/L (rat) (OECD 403)

**8052-41-3 Stoddard solvent**

Oral	LD50	>5,000 mg/kg (rat) (OECD 401)
Dermal	LD50	>3,000 mg/kg (rabbit) (OECD 402)
Inhalative	LC0/4h	>5.5 mg/L (rat) (OECD 403)

- **Skin corrosion/irritation**  
Causes skin irritation.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity**  
Suspected of damaging fertility or the unborn child.
- **STOT-single exposure**  
May cause drowsiness or dizziness.
- **STOT-repeated exposure**  
May cause damage to the nervous system through prolonged or repeated exposure. Route of exposure: Inhalation.

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- **Aspiration hazard**  
May be fatal if swallowed and enters airways.
- **Additional toxicological information:**
  - **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**  
Repr. 2

## 12 Ecological Information

### · Toxicity

#### · Aquatic toxicity:

##### 8052-41-3 Stoddard solvent

LC50/96h	3.5 mg/l (daphnia) (EPA OPPTS 850.1020)
NOEC / 21d	0.1 mg/l (daphnia) (OECD 211)
EC50/96h	1.2 mg/L (algae) (OECD 201)
NOELR	0.76 mg/L (algae) (OECD 201)
EL50/21d	0.33 mg/L (daphnia) (OECD 211)

### · Persistence and degradability

##### 8052-41-3 Stoddard solvent

Biodegradation >63 % /28d (not defined) (OECD 301B; ISO/ 9439/ EEC 92/69/V, C.4-C)

### · Behaviour in environmental systems:

- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

### · Ecotoxicological effects:

- **Remark:** Toxic for fish

### · Additional ecological information:

#### · General notes:

Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms  
Do not allow product to reach ground water, water bodies or sewage system.  
Danger to drinking water if even small quantities leak into soil.

### · Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### · Other adverse effects

 No further relevant information available.

## 13 Disposal considerations

### · Waste treatment methods

#### · Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

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- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

**14 Transport information**

· <b>UN-Number</b> · <b>ADG, IMDG, IATA</b>	UN1866
· <b>UN proper shipping name</b> · <b>ADG</b> · <b>IMDG, IATA</b>	1866 RESIN SOLUTION, special provision 640D RESIN SOLUTION
· <b>Transport hazard class(es)</b> · <b>ADG</b>	
 	
· <b>Class</b> · <b>Label</b>	3 (F1) Flammable liquids. 3
· <b>IMDG</b>	
 	
· <b>Class</b> · <b>Label</b>	3 Flammable liquids. 3
· <b>IATA</b>	
	
· <b>Class</b> · <b>Label</b>	3 Flammable liquids. 3
· <b>Packing group</b> · <b>ADG, IMDG, IATA</b>	II
· <b>Environmental hazards:</b> · <b>Marine pollutant:</b>	No Symbol (fish and tree)
· <b>Special marking (ADG):</b>	Symbol (fish and tree)
· <b>Special precautions for user</b> · <b>Kemler Number:</b> · <b>EMS Number:</b>	Warning: Flammable liquids. 33 F-E,S-E

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· <b>Stowage Category</b>	B
· <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	-
· <b>ADG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>Transport category</b>	2
· <b>Tunnel restriction code</b>	D/E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN 1866 RESIN SOLUTION, SPECIAL PROVISION 640D, 3, II

**15 Regulatory information**

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

· <b>Australian Inventory of Industrial Chemicals</b>	
110-54-3	n-hexane
110-82-7	cyclohexane
8052-41-3	Stoddard solvent
68988-56-7	Silicic acid, sodium salt, reaction products with chlorotrimethylsilane and iso-Pr alc.
1330-20-7	xylene, mixed isomers, pure
95-63-6	1,2,4-trimethylbenzene

· <b>Australia: Priority Existing Chemicals</b>
None of the ingredients is listed.

- **Directive 2012/18/EU**
  - **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
  - **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**16 Other information**

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**  
H225 Highly flammable liquid and vapour.

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H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

H361 Suspected of damaging fertility or the unborn child.

H361f Suspected of damaging fertility.

H372 Causes damage to organs through prolonged or repeated exposure.

H373 May cause damage to organs through prolonged or repeated exposure.

**Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Flam. Liq. 3: Flammable liquids – Category 3

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Repr. 2: Reproductive toxicity – Category 2

Repr. 2: Reproductive toxicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Asp. Tox. 1: Aspiration hazard – Category 1

**\* Data compared to the previous version altered.**