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**SECTION 1: Identification of the substance/mixture and of the company****Product Identifier**

Product Name: SiSiB® WR1701

**Relevant identified uses of the substance or mixture and uses advised against**

Use of substance / preparation: Industrial use

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

Nanjing SiSiB Silicones Co., Ltd.  
Guanghua Sci & Tech Industrial Zone,  
No. 104, Guanghua Road, Nanjing 210007, P.R.China  
Email: SDS@SiSiB.com

Emergency Telephone Number: +86-25-8468-0091

**SECTION 2: Hazardous identification****Classification of the substance or mixture****Classification according to (REGULATION (EC) No 1272/2008)**

Flammable liquids

Category 3

H226

**Label elements****Labeling as per (EU) 1272/2008)**

Pictogram(s):



Signal word

Warning

Hazard statement

H314 -Causes severe skin burns and eye damage.

**H-Code****Hazard Statements**

H226

Flammable liquid and vapor.

**P-Code****Precautionary Statements**

P210

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280

Wear protective gloves/protective clothing/eye protection.

P233

Keep container tightly closed.

P370 + P378

In case of fire: Use extinguishing powder, alcohol-resistant foam or carbon dioxide to extinguish.

P403 + P235

Store in a well-ventilated place. Keep cool.

P501

Dispose of contents/container to waste disposal.

**Other hazards**

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Inhalation of aerosol spray may damage health.

The product hydrolyses under formation of ethanol (CAS NO. 64-17-5). Ethanol is classified concerning both physical and health hazards. The hydrolysis rate and consequently the relevance for the hazard profile of the product is strongly dependent on the specific conditions.

Endocrine disrupting properties - human health: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Endocrine disrupting properties - environment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### SECTION 3: Composition/information on ingredients

#### Substances

Alkoxy silanes

Triethoxy(2,4,4-trimethylpentyl)silane >80 %

CAS-No.: 35435-21-3

EC-No.: 252-558-1

This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57) in amounts above  $\geq 0.1\%$ .

#### Mixtures

not applicable

### SECTION 4: First aid measures

#### Description of first aid measures

##### General information:

In case of accident or if you feel unwell seek medical advice (show label or SDS where possible).

##### After contact with the eyes:

Rinse immediately with plenty of water. Seek medical advice in case of continuous irritation.

##### After contact with the skin:

Wash with plenty of water or water and soap. In the event of a visible skin change or other complaints, seek medical advice (show label or SDS where possible).

##### After inhalation:

Provide fresh air.

##### After swallowing:

Give several small portions of water to drink. Do not induce vomiting.

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## Most important symptoms and effects, both acute and delayed

Any relevant information can be found in other parts of this section.

## Indication of any immediate medical attention and special treatment needed

Further toxicology information in section 11 must be observed.

## SECTION 5: Firefighting measures

### Extinguishing media

#### Suitable extinguishing media:

alcohol-resistant foam , carbon dioxide , water mist , sprinkler system , sand , extinguishing powder.

#### Extinguishing media which must not be used for safety reasons:

water jet

#### Special hazards arising from the substance or mixture

Risk of hazardous gasses or fumes in the event of fire. Exposure to combustion products may be a health hazard! Hazardous combustion products: toxic and very toxic fumes.

#### Advice for firefighters

#### Special protective equipment for firefighters:

Use respiratory protection independent of recirculated air. Keep unprotected persons away.

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Secure the area. Wear personal protection equipment (see section 8). Keep unprotected persons away. If material is released indicate risk of slipping. Do not walk through spilled material.

### Environmental precautions

Prevent material from entering surface waters, drains or sewers and soil. Close leak if possible without risk. Contain any fluid that runs out using suitable material (e.g. earth). Retain contaminated water/extinguishing water. Dispose of in prescribed marked containers. Inform authorities if substance leaks into surface waters, sewerage or ground.

### Methods and material for containment and cleaning up

Take up mechanically and dispose of according to local/state/federal regulations. Do not flush away with water. For small amounts: Absorb with a neutral (non-acidic / non-basic) liquid binding material such as diatomaceous earth and dispose of according to government regulations. For large amounts: Liquids may be recovered using suction devices or pumps. If flammable, only air driven or properly rated electrical equipment should be used. Clean any slippery coating that remains using a detergent / soap solution or another biodegradable cleaner. Silicone fluids are slippery; spills are a safety hazard. Apply sand or other inert granular material to improve traction.

### Further information:

Exhaust vapors. Eliminate all sources of ignition. Consider explosion protection. Observe notes under

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section 7.

**Reference to other sections**

Relevant information in other sections has to be considered. This applies in particular for information given on personal protective equipment (section 8) and on disposal (section 13).

**SECTION 7: Handling and storage****Precautions for safe handling:**

Ensure adequate ventilation. Must be syphoned off in situ. Spilled substance increases risk of slipping. Avoid formation of aerosols. In case of aerosol formation special protective measures are required (exhausting by suction, respiratory protection). Observe information in section 8. Keep away from incompatible substances in accordance with section 10.

**Precautions against fire and explosion:**

Product may release ethanol. Flammable vapors may accumulate and form explosive mixtures with air in containers, process vessels, including partial, empty and uncleaned containers and vessels, or other enclosed spaces. Keep away from sources of ignition and do not smoke. Take precautionary measures against electrostatic charging. Cool endangered containers with water.

**Conditions for safe storage, including any incompatibilities****Conditions for storage rooms and vessels:**

Observe local/state/federal regulations.

**Advice for storage of incompatible materials:**

Observe local/state/federal regulations.

**Further information for storage:**

Store in a dry and cool place. Protect against moisture. Store container in a well ventilated place.

**Specific end use(s)**

No data available.

If the annex to this safety data sheet contains exposure scenarios for end uses, the information provided therein has to be observed.

**SECTION 8: Exposure controls/personal protection****Control parameters****Maximum airborne concentrations at the workplace:**

Substance	Type	mg/m <sup>3</sup>	ppm
Ethanol	OEL	1920,0	1000,0
Aerosol - inhalable fraction		10,0	

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The aerosol limit specified is a recommendation should aerosol be formed during processing.

**Derived No-Effect Level (DNEL):**

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## Triethoxy(2,4,4-trimethylpentyl)silane

Area of use:	Value:
Worker; by inhalation; systemic (long term) systemic (acute)	45 mg/m <sup>3</sup>
Worker; dermal; systemic (long term) systemic (acute)	13,4 mg/kg/day
Consumer; by inhalation; systemic (long term)	11,3 mg/m <sup>3</sup>
Consumer; by inhalation; systemic effects (acute/subacute)	67,8 mg/m <sup>3</sup>
Consumer; dermal; systemic (long term)	9,5 mg/kg/day
Consumer; dermal; systemic effects (acute/subchronisch)	19 mg/kg/day
Consumer; oral; systemic (long term)	9,5 mg/kg/day
Consumer; oral; systemic (acute)	19 mg/kg/day

### Predicted No Effect Concentration (PNEC):

## Triethoxy(2,4,4-trimethylpentyl)silane

Area of use:	Value:
freshwater	0,64 mg/l
marine water	0,064 mg/l
Intermittent release	6,4 mg/l
Sediment (freshwater)	4,3 mg/kg dry mass
Sediment (marine water)	0,43 mg/kg dry mass
Soil	0,48 mg/kg dry mass
sewage treatment plant	1 mg/l
Secondary poisoning	10 mg/kg food

### Exposure controls

#### Exposure in the work place limited and controlled

#### General protection and hygiene measures:

Observe standard industrial hygiene practices for the handling of chemical substances. Do not eat, drink or smoke when handling.

#### Further information for system design and engineering measures

Observe information in section 7. Observe national regulatory requirements.

#### Personal protection equipment:

##### Respiratory protection

If inhalative exposure above the occupational exposure limit cannot be excluded, adequate respiratory protection equipment must be used. Suitable respiratory equipment: Respirator with a full face mask, according to acknowledged standards such as EN 136.

Recommended Filter type: Gas filter type ABEK (certain inorganic, organic and acidic gases and vapors; ammonia/amines), according to acknowledged standards such as EN 14387

In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit. Suitable respiratory equipment: Respirator with a full face mask, according to acknowledged standards such as EN 136.

Recommended Filter type: Combined filter type ABEK-P2 (certain inorganic, organic and acidic gases and vapors; ammonia/amines; particles), according to acknowledged standards such as EN 14387

Observe the equipment manufacturer's information and wear time limits for respirators.

##### Eye protection

Recommendation: protective goggles.

##### Hand protection

Protective gloves are required at all times when handling the material, according to recognized standards

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such as EN374.

Recommended glove types: Protective gloves made of butyl rubber  
thickness of the material: > 0,3 mm

Breakthrough time: > 480 min

Recommended glove types: Protective gloves made of nitrile rubber  
thickness of the material: > 0,1 mm

Breakthrough time: > 480 min

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Note that, due to the numerous external influences (such as temperature), a chemically resistant protective glove in daily use may have a service life that is considerably shorter than the measured break through time.

## Skin protection

protective clothing .

## Exposure to the environment limited and controlled

Prevent material from entering surface waters, drains or sewers and soil.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

Property:	Value:
Physical state	liquid
Color	colorless
Odor	faint
Odour Threshold	no data available
Melting point	< -100 °C at 1013 hPa (OECD 102)
Freezing point	-140.5 °C
Boiling point/boiling range	239 °C at 1013 hPa (OECD 103)
Lower explosion limit	no data available
Upper explosion limit	no data available
Flash point	65 °C (closed cup)
Ignition temperature	251 °C (EN 14522)
Thermal decomposition	no data available
pH	Not applicable.
Water solubility	no data available
Partition coefficient: n-octanol/water	6.1
Vapor pressure	no data available
Density	0.87 g/cm <sup>3</sup> (20 °C; 1013 hPa) (DIN 51757)
Relative vapor density	no data available
Particle Size Distribution	Not applicable.

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Sustained combustibility

no data available

Evaporation rate

no data available

Molecular weight

no data available

**Other information**

No data available.

**SECTION 10: Stability and reactivity****Reactivity; Chemical stability; Possibility of hazardous reactions**

If stored and handled in accordance with standard industrial practices no hazardous reactions are known.

Relevant information can possibly be found in other parts of this section.

**Conditions to avoid**

Moisture, heat, open flames, and other sources of ignition.

**Incompatible materials**

Reacts with water, basic substances and acids. The reaction takes place with the formation of ethanol.

**Hazardous decomposition products**

Ethanol by hydrolysis. Measurements have shown the formation of small amounts of formaldehyde at temperatures above about 150 °C (302 °F) through oxidation.

**SECTION 11: Toxicological information****Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity****Assessment:**

Based on the available data acute toxic effects are not expected after single oral exposure. Based on the available data acute toxic effects are not expected after single dermal exposure. Based on the available data acute toxic effects are not expected after short-term inhalative exposure.

**Product details:**

Exposure routes	Result/Effect
Oral	LD50 > 2000 mg/kg Species: Rat, Method: OECD 423, Source: test report
dermal	LD50 > 2000 mg/kg Species: Rat, Method: OECD 402, Source: test report
by inhalation ((spray))	LC50 > 11,2 mg/l; 4 h No mortality observed at this dose. Species: Rat, Test substance: read-across substance, Method: OECD 403, Source: test report

**Skin corrosion/irritation****Assessment:**

Based on the available data a clinically relevant skin irritation hazard is not expected.

**Product details:**

No skin irritation

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(Species: Rabbit, Method: OECD 404, Source: test report)

## Serious eye damage/eye irritation

### Assessment:

Based on the available data a clinically relevant eye irritation hazard is not expected.

### Product details:

No eye irritation

(Species: Rabbit, Method: OECD 405, Source: test report)

## Respiratory or skin sensitization

### Assessment:

Based on the available data a sensitization reaction is not expected from this product.

### Product details:

Exposure routes      Result

Skin contact              Does not cause skin sensitization.

(Species: Guinea pig, Test system: Maximization Test, Method: OECD 406, Source: test report)

## Germ cell mutagenicity

### Assessment:

Based on known data a significant mutagenic potential may be excluded.

negative

(Test system: mutation assay (in vitro) / bacterial cells, Method: OECD 471, Source: test report)

negative

(Test system: chromosome aberration assay (in vitro) / mammalian cells, Method: OECD 473, Source: test report)

positive (without metabolic activation), negative (with metabolic activation)

Positive results only in the presence of cytotoxicity.

(Test system: chromosome aberration assay (in vitro) / mammalian cells, Method: OECD 473, Source: test report)

negative

(Test system: mutation assay (in vitro) / mouse lymphoma cells, Test substance: read-across substance, Method: OECD 476, Source: test report)

negative

(Test system: micro nucleus assay (in vivo), Species: Mouse Application Route: Oral, Cell type: erythrocytes, Method: OECD 474, Source: test report)

## Carcinogenicity

### Assessment:

Based on the available toxicological data no specific evaluation of the carcinogenic potential is scientifically implicated.

## Reproductive toxicity

### Assessment:

Animal tests have shown no indications of possibility of damage to embryo and impairment of fertility.

### Product details:



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## Reproductive Toxicity/Fertility

NOAEL:  $\geq 1000$  mg/kg

(Test system: screening test, Species: Rat, Application Route: Oral, Method: OECD 422, Source: Conclusion by analogy)

## Reproductive Toxicity/Development/Teratogenicity

NOAEL (developmental):  $\geq 1000$  mg/kg

NOAEL (maternal):  $\geq 1000$  mg/kg

(Symptoms/Effect: Nothing abnormal detected., Test system: Developmental Toxicity Study, Species: Rat, Application Route: Oral, Route of administration: gavage, Frequency of Treatment: day 6 - 20 of gestation, Method: OECD 414, Source: test report)

## Specific target organ toxicity - single exposure

### Assessment:

For this endpoint no toxicological test data is available for the whole product.

## Specific target organ toxicity - repeated exposure

### Assessment:

Based on the available data the criteria for classification as toxic after repeated exposure are not fulfilled.

### Product details:

Result/Effect

NOAEL: 150 mg/kg

The given result is based on an evaluation of the whole database for this endpoint ("weight of evidence").

(target organs: Bladder, Test system: Subacute study, Species: Rat, Application Route: Oral, Route of administration: gavage, Test period: 28 d, Frequency of Treatment: 7 d/w, Method: OECD 407, Source: test report)

NOAEC:  $\geq 3$  mg/l

(Test system: Subacute study, Species: Rat, Application Route: by inhalation, Route of administration: aerosol, Test period: 28 d, Frequency of Treatment: 5 d/w, hours/day: 6, Subsequent observation period: 14 d, Test substance: read-across substance, Method: OECD 412, Source: test report)

## Aspiration hazard

### Assessment:

For this endpoint no toxicological test data is available for the whole product.

For this endpoint no toxicological test data is available for the whole product.

## Information on other hazards

### Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### Further toxicological information

Hydrolysis product / impurity: Ethanol (64-17-5) is readily absorbed at all exposure routes. Ethanol may cause irritation of eyes and mucosa, trigger dysfunction of the central nervous system and cause nausea as well as dizziness. Chronic exposure to high amounts of ethanol may cause damage to liver and central

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nervous system.

## SECTION 12: Ecological information

### Toxicity

#### Assessment:

Up to the maximal solubility in the test medium the substance and its hydrolysis products do not show any acute effects on aquatic organisms that are relevant for classification and labelling. According to current knowledge adverse effects on water purification plants are not expected.

#### Product details:

Result/Effect	Species/Test system	Source
LC50: > 100 mg/l (nominal)	semi-static test Oncorhynchus mykiss (rainbow trout) (96 h)	test report OECD 203
EC50: The effect level is greater than the maximum achievable concentration.	Daphnia (water flea) (48 h)	Expert judgement
IC50 (Growth rate): The effect level is greater than the maximum achievable concentration.	Pseudokirchneriella subcapitata (green algae) (72 h)	Expert judgement
EC50: > 100 mg/l	activated sludge (3 h)	test report
NOEC (reproduction rate): 32 mg/l (measured) The effect level is greater than the maximum achievable concentration.	semi-static test Daphnia magna (Water flea) (21 d)	test report OECD 211

### Persistence and degradability

#### Assessment:

Contact with water liberates ethanol and silanol- and/or siloxanol-compounds. The hydrolysis product (Ethanol) is readily biologically degradable.

#### Product details:

#### Biodegradation:

Result	Test system/Method	Source
13 % / 28 d Not readily biodegradable. Rapid biological degradation of the organic hydrolysis product.	biological oxygen demand (BOD)	test report OECD 310

#### Hydrolysis:

Result	Test system	Source
Half-life: 22 h	pH 7; 20 - 25 °C	calc. value

### Bioaccumulative potential

#### Assessment:

Product(s) of hydrolysis: Bioaccumulation is not expected to occur.

#### Mobility in soil

#### Assessment:

No data known.

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## Results of PBT and vPvB assessment

This product contains no relevant substances considered to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

## Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## Other adverse effects

none known

## SECTION 13: Disposal considerations

### Waste treatment methods

#### Material

Recommendation:

Material that cannot be used, reprocessed or recycled should be disposed of in accordance with Federal, State, and local regulations at an approved facility. Depending on the regulations, waste treatment methods may include, e.g., landfill or incineration.

#### Uncleaned packaging

##### Recommendation:

Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations. Uncleaned packaging should be treated with the same precautions as the material.

#### Waste Key Number

It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

## SECTION 14: Transportation 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: -

### Packing group

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ADR/RID: -

IMDG: -

IATA: -

## Environmental hazards

ADR/RID: no

IMDG Marine Pollutant: no

IATA: no

## Transport in bulk according to Annex II of MARPOL and the IBC Code

Bulk transport in tankers is not intended.

## SECTION 15: Regulatory information

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

National and local regulations must be observed.

For information on labelling please refer to section 2 of this document.

### Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances (Seveso III):

Listed in Directive	Ser. number in list	Qualifying Quantity 1	Qualifying Quantity 2
FLAMMABLE LIQUIDS	P5c	5.000 t	50.000 t

### Relevant regulations:

SI 2002/1689: CHIP Regulations 2002

SI 2002/2677: COSHH Regulations 2002

SI 1999/3242: Management of Health & Safety at Work Regulations 1999

Health & Safety at Work Act 1974

SI 1993/1643: Environmental Protection Act 1993 & Subsidiary Regulations.

Other national and local measures relating to the workplace, pollution control, environmental protection and waste control.

### Other specifications, restrictions and prohibitions:

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals: Not applicable

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors - ANNEX I. RESTRICTED EXPLOSIVES PRECURSORS: Not applicable

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors - ANNEX II. REPORTABLE EXPLOSIVES PRECURSORS: Not applicable

Details of international registration status

Relevant information about individual substance inventories, where available, is given below.

Japan

### ENCS (Handbook of Existing and New Chemical Substances):

This product is listed in, or complies with, the substance inventory. Y

New Zealand

### NZIoC (New Zealand Inventory of Chemicals):

This product is not listed or in compliance with the substance inventory.

Australia

### AIIC (Australian Inventory of Industrial Chemicals):

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This product is listed in, or complies with, the substance inventory. Y

China

**IECSC** (Inventory of Existing Chemical Substances in China):

This product is listed in, or complies with, the substance inventory. Y

Canada

**DSL** (Domestic Substance List):

This product is listed in, or complies with, the substance inventory. Y

Philippines

**PICCS** (Philippine Inventory of Chemicals and Chemical Substances):

This product is listed in, or complies with, the substance inventory. Y

United States of America (USA)

**TSCA** (Toxic Substance Control Act Chemical Substance Inventory):

All components of this product are listed as active or are in compliance with the substance inventory. TY

Taiwan

**TCSI** (Taiwan Chemical Substance Inventory):

This product is listed in, or complies with, the substance inventory. General note: The Taiwanese chemicals regulation requires a phase 1 registration for TCSI-listed or TCSI-compliant substances if imports to Taiwan or manufacturing in Taiwan exceed the trigger quantity of 100 kg/a (for mixtures to be calculated per each ingredient). It is the duty of the importing/manufacturing legal entity to take care of this obligation. Y

European Economic Area (EEA)

**REACH** (Regulation (EC) No 1907/2006):

General note: the registration obligations for substances imported into the EEA or manufactured within the EEA by the supplier mentioned in section 1 are fulfilled by the said supplier. The registration obligations for substances imported into the EEA by customers or other downstream users must be fulfilled by the latter.

South Korea (Republic of Korea)

**AREC** (Act on Registration and Evaluation of Chemicals; "K-REACH"):

Please approach your regular contact for more detailed information.

## Chemical safety assessment

For this product, a chemical safety assessment according to (EC) regulation 1907/2006 (REACH) has been carried out.

## SECTION 16: Other information

### Further information

It must be recognized that the physical and chemical properties of any product may not be fully understood and that new, possibly hazardous products may arise from reactions between chemicals. The information given in this data sheet is based on our present knowledge and shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.