

Safety data sheet

According to 91/155 EEC

Printing date 22.11.2010

Version number 23

Revision: 22.11.2010











1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** Bonding agent S
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation** Chemical intermediate
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Forbo Siegling Pty. Ltd
Factory 1, 124-126 Rodeo Drive
Dandenong South
Victoria 3175. Australia
Ph.: 1300137933
Fax: 1300137944
- **Information department:**
Chemical Laboratory
Email: Claudius.Hayduk@forbo.com
- **Emergency telephone number:**
(001) 352 323 3500 (Transport hazardous materials)
++49 (0) 511-6704-214

2 Composition/information on ingredients

- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 64742-49-0 EINECS: 265-151-9	Naphtha (petroleum), hydrotreated light, <0,1% benzene  Xn R65	25-50%
CAS: 90622-56-3 EINECS: 292-458-5	C7 - C10 Isoalkane  Xn R65;  Xi R38;  F R11;  N R51/53 R67	25-50%
CAS: 5593-70-4 EINECS: 227-006-8	titanium tetrabutanolate R10	2.5-10%
CAS: 78-10-4 EINECS: 201-083-8	tetraethyl orthosilicate  Xn R20;  Xi R36/37 R10	< 2.5%
CAS: 108-88-3 EINECS: 203-625-9	toluene  Xn R48/20-63-65;  Xi R38;  F R11 R67	< 2.5%

- **Additional information** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xn; Harmful

R65: Harmful: may cause lung damage if swallowed.



Xi; Irritant

R38: Irritating to skin.



F; Highly flammable

R11: Highly flammable.



N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R67: Vapours may cause drowsiness and dizziness.

- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

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Has a narcotizing effect.

- **Classification system:**

The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

- **Label elements**

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

- **Code letter and hazard designation of product:**



Xn Harmful
F Highly flammable
N Dangerous for the environment

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

Naphtha (petroleum), hydrotreated light, <0,1% benzene
C7 - C10 Isoalkane

- **Risk phrases:**

11 Highly flammable.
38 Irritating to skin.
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
65 Harmful: may cause lung damage if swallowed.
67 Vapours may cause drowsiness and dizziness.

- **Safety phrases:**

9 Keep container in a well-ventilated place.
16 Keep away from sources of ignition - No smoking.
23 Do not breathe fumes.
29 Do not empty into drains.
33 Take precautionary measures against static discharges.
57 Use appropriate container to avoid environmental contamination.

- **Information pertaining to particular dangers for man and environment**

- **Safety phrases:**

9 Keep container in a well-ventilated place.
16 Keep away from sources of ignition - No smoking.
23 Do not breathe fumes.
29 Do not empty into drains.
33 Take precautionary measures against static discharges.
57 Use appropriate container to avoid environmental contamination.

- **Other hazards**

- **Results of PBT and vPvB assessment**

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

4 First aid measures

- **Description of first aid measures**

- **After inhalation**

Take affected persons into fresh air and keep quiet.
In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact**

If skin irritation continues, consult a doctor.
Immediately wash with water and soap and rinse thoroughly.

- **After eye contact** Rinse opened eye for several minutes under running water.

- **After swallowing** If symptoms persist consult doctor.

- **Information for doctor** MSDB

- **Indication of any immediate medical attention and special treatment needed**

If swallowed, gastric irrigation with added, activated carbon.

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5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents**
Alcohol resistant foam

CO₂, sand, extinguishing powder. Do not use water.

- **For safety reasons unsuitable extinguishing agents**
Water.
Water with full jet.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**



Wear protective equipment. Keep unprotected persons away.

- **Environmental precautions:**
Prevent seepage into sewage system, workpits and cellars.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **Precautions for safe handling**
Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:**
Use explosion-proof apparatus / fittings and spark-proof tools.



Keep ignition sources away - Do not smoke.

- Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**
Provide solvent resistant, sealed floor.
Prevent any seepage into the ground.
Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.
Keep receptacle tightly sealed.

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Store in cool, dry conditions in well sealed receptacles.

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8 Exposure controls/personal protection

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

• **Components with limit values that require monitoring at the workplace:**

78-10-4 tetraethyl orthosilicate

NES (Australia) | 85 mg/m³, 10 ppm

108-88-3 toluene

NES (Australia) | Short-term value: 574 mg/m³, 150 ppm
 Long-term value: 191 mg/m³, 50 ppm
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- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment**

- **General protective and hygienic measures**

Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing
 Wash hands before breaks and at the end of work.
 Do not inhale gases / fumes / aerosols.
 Avoid contact with the skin.
 Avoid contact with the eyes and skin.

- **Breathing equipment:**

Use suitable respiratory protective device when high concentrations are present.



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:**

Solvent resistant gloves
 Protective gloves.

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

- **Material of gloves**

Natural rubber, NR

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**

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

- **Eye protection:** Safety glasses

- **Body protection:** Protective work clothing.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Fluid
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Not determined.

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· pH-value:	Not determined.
· Change in condition	
Melting point/Melting range:	Melting point > 120 °C
Boiling point/Boiling range:	98 °C
· Flash point:	2 °C
· Ignition temperature:	300 °C
· Decomposition temperature:	Not determined.
· Self igniting	Not determined.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	1.3 Vol %
Upper:	10.5 Vol %
· Vapour pressure at 20 °C:	3.1 hPa
· Density at 20 °C:	0.747 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix
· Segregation coefficient (n-octanol/water):	Not determined.
· Viscosity:	
dynamic:	Not determined.
kinematic:	Not determined.
· Solvent content:	
Organic solvents:	52.5 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used 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:** No dangerous decomposition products known

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant

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12 Ecological information

- **Toxicity**
- **Acquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **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:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.



Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms

- **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.

- **European waste catalogue**

08 04 09* | waste adhesives and sealants containing organic solvents or other dangerous substances

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

14 Transport information

- **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 3 Flammable liquids.
- **Danger code (Kemler):** 33
- **UN-Number:** 1993
- **Packaging group:** II
- **Label:** 3
- **Special marking:** Symbol (fish and tree)
- **UN proper shipping name:** 1993 FLAMMABLE LIQUID, N.O.S., special provision 640D (N-PROPYL NITRATE, TOLUENE)

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· Tunnel restriction code D/E

· Maritime transport IMDG:



· **IMDG Class:** 3
 · **UN Number:** 1993
 · **Label** 3
 · **Packaging group:** II
 · **EMS Number:** F-E,S-E
 · **Marine pollutant:** Yes
 Symbol (fish and tree)
 · **Propper shipping name:** FLAMMABLE LIQUID, N.O.S. (N-PROPYL NITRATE, TOLUENE)

· Air transport ICAO-TI and IATA-DGR:



· **ICAO/IATA Class:** 3
 · **UN/ID Number:** 1993
 · **Label** 3
 · **Packaging group:** II
 · **Propper shipping name:** FLAMMABLE LIQUID, N.O.S. (N-PROPYL NITRATE, TOLUENE)

· **Environmental hazards:** Product contains environmentally hazardous substances: C7 - C10 Isoalkane
 · **Special precautions for user** Warning: Flammable liquids.
 · **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

15 Regulatory information

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

· Australian Inventory of Chemical Substances

All ingredients are listed.

· Standard for the Uniform Scheduling of Drugs and Poisons

108-88-3 | toluene

S6

· Markings according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

· Code letter and hazard designation of product:



Xn Harmful
 F Highly flammable
 N Dangerous for the environment

· Hazard-determining components of labelling:

Naphtha (petroleum), hydrotreated light, <0,1% benzene
C7 - C10 Isoalkane

· Risk phrases:

11 Highly flammable.
 38 Irritating to skin.
 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 65 Harmful: may cause lung damage if swallowed.
 67 Vapours may cause drowsiness and dizziness.

· Safety phrases:

9 Keep container in a well-ventilated place.

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- 16 Keep away from sources of ignition - No smoking.
- 23 Do not breathe fumes.
- 29 Do not empty into drains.
- 33 Take precautionary measures against static discharges.
- 57 Use appropriate container to avoid environmental contamination.

- **National regulations**

- **Technical instructions (air):**

Class	Share in %
III	50.0
NK	2.5

- **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

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

- **Relevant phrases**

- R10 Flammable.
- R11 Highly flammable.
- R20 Harmful by inhalation.
- R36/37 Irritating to eyes and respiratory system.
- R38 Irritating to skin.
- R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R63 Possible risk of harm to the unborn child.
- R65 Harmful: may cause lung damage if swallowed.
- R67 Vapours may cause drowsiness and dizziness.

- **Department issuing MSDS:** Chemical Laboratory

- **Contact:**

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