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

· **1.1 Product identifier**

· **Trade name: SabaPVC S3**
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture** Adhesive

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
SABA Dinxperlo BV
Industriestraat 3
NL-7091 DC Dinxperlo
The Netherlands

P.O Box 3
NL - 7090 AA Dinxperlo
The Netherlands

Tel.: +31 315 65 89 99
Fax: +31 315 65 32 07
E-mail: info@saba-adhesives.com
Internet: www.saba-adhesives.com

· **Further information obtainable from:** Drs. J.W. Diesveld (e-mail: johan.diesveld@saba-adhesives.com)
· **1.4 Emergency telephone number:** SABA Dinxperlo BV: Tel.: +31 315 65 89 99

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SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**

Flam. Liq. 2	H225	Highly flammable liquid and vapour.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Dam. 1	H318	Causes serious eye damage.
Carc. 2	H351	Suspected of causing cancer.
STOT SE 3	H336	May cause drowsiness or dizziness.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
· **Hazard pictograms**

GHS02 GHS05 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**
cyclohexanone
tetrahydrofuran
butanone
· **Hazard statements**
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H351 Suspected of causing cancer.
H336 May cause drowsiness or dizziness.

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· ***Precautionary statements***

P210	*Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*
P261	*Avoid breathing vapours.*
P280	*Wear protective gloves / eye protection.*
P305+P351+P338	*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
P310	*Immediately call a doctor.*
P370+P378	*In case of fire: Use for extinction: CO2, powder or water spray.*
P403+P235	*Store in a well-ventilated place. Keep cool.*
P501	*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· ***Additional information:***
EUH019 May form explosive peroxides.
· ***2.3 Other hazards***
· ***Results of PBT and vPvB assessment***
· ***PBT:*** *Not applicable.*
· ***vPvB:*** *Not applicable.*

*
SECTION 3: Composition/information on ingredients

· ***3.2 Chemical characterisation: Mixtures***
· ***Description:*** *Mixture of components listed below with non-hazardous additions.*

· ***Dangerous components:***		
CAS: 78-93-3 *EINECS: 201-159-0* *Reg.nr.: 01-2119457290-43-xxxx*	*butanone* *Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336*	*43.48%*
CAS: 108-94-1 *EINECS: 203-631-1* *Reg.nr.: 01-2119453616-35-xxxx*	*cyclohexanone* *Flam. Liq. 3, H226; Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315*	*18.58%*
CAS: 109-99-9 *EINECS: 203-726-8* *Reg.nr.: 01 -2119444314-46-xxxx*	*tetrahydrofuran* *Flam. Liq. 2, H225; Carc. 2, H351; Eye Irrit. 2, H319; STOT SE 3, H335*	*13.94%*

· ***SVHC*** *Not applicable.*
· ***Additional information:*** *For the wording of the listed hazard phrases refer to section 16.*

SECTION 4: First aid measures

· ***4.1 Description of 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.
Take affected persons out of danger area and lay down.
· ***After inhalation:***
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
· ***After skin contact:*** *Immediately wash with water and soap and rinse thoroughly.*
· ***After eye contact:*** *Rinse opened eye for several minutes under running water. Then consult a doctor.*
· ***After swallowing:***
Rinse out mouth and then drink plenty of water.
Do not induce vomiting.
If symptoms persist consult doctor.
· ***4.2 Most important symptoms and effects, both acute and delayed*** *No further relevant information available.*

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· ***4.3 Indication of any immediate medical attention and special treatment needed***
No further relevant information available.

SECTION 5: Firefighting measures

· ***5.1 Extinguishing media***
· ***Suitable extinguishing agents:***
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· ***For safety reasons unsuitable extinguishing agents:*** *Water with full jet*
· ***5.2 Special hazards arising from the substance or mixture***
In case of fire, the following can be released:
Hydrogen chloride (HCl)
Carbon monoxide and carbon dioxide
Metal oxides.
· ***5.3 Advice for firefighters***
· ***Protective equipment:***
Wear fully protective suit.
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.

SECTION 6: Accidental release measures

· ***6.1 Personal precautions, protective equipment and emergency procedures***
Keep people at a distance and stay on the windward side.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
· ***6.2 Environmental precautions:*** *Prevent seepage into sewage system, workpits and cellars.*
· ***6.3 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.
· ***6.4 Reference to other sections***
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

*
SECTION 7: Handling and storage

· ***7.1 Precautions for safe handling***
The usual precautionary measures are to be adhered to when handling chemicals.
Open and handle receptacle with care.
· ***Information about fire - and explosion protection:***
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· ***7.2 Conditions for safe storage, including any incompatibilities***
· ***Storage:***
· ***Requirements to be met by storerooms and receptacles:***
Store only in the original receptacle.
Protect from frost.
Protect from heat and direct sunlight.
· ***Information about storage in one common storage facility:*** *Store away from foodstuffs.*
· ***Further information about storage conditions:*** *Store in cool, dry conditions in well sealed receptacles.*
· ***7.3 Specific end use(s)*** *No further relevant information available.*

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SECTION 8: Exposure controls/personal protection

· ***Additional information about design of technical facilities:*** *No further data; see item 7.*

· ***8.1 Control parameters***

· ***Ingredients with limit values that require monitoring at the workplace:***	
78-93-3 butanone	
WEL	*Short-term value: 899 mg/m³, 300 ppm* *Long-term value: 600 mg/m³, 200 ppm* *Sk, BMGV*
108-94-1 cyclohexanone	
WEL	*Short-term value: 82 mg/m³, 20 ppm* *Long-term value: 41 mg/m³, 10 ppm* *Sk, BMGV*
109-99-9 tetrahydrofuran	
WEL	*Short-term value: 300 mg/m³, 100 ppm* *Long-term value: 150 mg/m³, 50 ppm* *Sk*

· ***DNELs***		
78-93-3 butanone		
Dermal	*DNEL Consumer*	*412 mg/kg BW (Chronic effects; Systemic)*
	DNEL Worker	*1,161 mg/kg BW (Chronic effects; Systemic)*
Inhalative	*DNEL Consumer*	*106 mg/m3 (Chronic effects; Systemic)*
	DNEL Worker	*600 mg/m3 (Chronic effects; Systemic)*
108-94-1 cyclohexanone		
Oral	*DNEL Consumer*	*1.5 mg/kg BW (Acute effects; Systemic)*
		1.5 mg/kg BW (Chronic effects; Systemic)
Dermal	*DNEL Consumer*	*1 mg/kg BW (Acute effects; Systemic)*
		1 mg/kg BW (Chronic effects; Systemic)
	DNEL Worker	*4 mg/kg BW (Acute effects; Systemic)*
		4 mg/kg BW (Chronic effects; Systemic)
Inhalative	*DNEL Consumer*	*40 mg/m3 (Acute effects; Local)*
		20 mg/m3 (Acute effects; Systemic)
		20 mg/m3 (Chronic effects; Local)
		10 mg/m3 (Chronic effects; Systemic)
	DNEL Worker	*80 mg/m3 (Acute effects; Local)*
		80 mg/m3 (Acute effects; Systemic)
		40 mg/m3 (Chronic effects; Local)
		40 mg/m3 (Chronic effects; Systemic)
109-99-9 tetrahydrofuran		
Oral	*DNEL Consumer*	*15 mg/kg BW (Chronic effects; Systemic)*
Dermal	*DNEL Consumer*	*15 mg/kg BW (Chronic effects; Systemic)*
	DNEL Worker	*25 mg/kg BW (Chronic effects; Systemic)*
Inhalative	*DNEL Consumer*	*150 mg/m3 (Acute effects; Local)*
		150 mg/m3 (Acute effects; Systemic)
		75 mg/m3 (Chronic effects; Local)
		62 mg/m3 (Chronic effects; Systemic)
	DNEL Worker	*300 mg/m3 (Acute effects; Local)*
		300 mg/m3 (Acute effects; Systemic)

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		150 mg/m3 (Chronic effects; Local) *150 mg/m3 (Chronic effects; Systemic)*

· ***PNECs***

78-93-3 butanone	
PNEC Aquatic ecosystem	*55.8 mg/l (Fresh water)* *55.8 mg/l (Intermittent release)* *55.8 mg/l (Marine water)* *709 mg/l (Sewage treatment)*
PNEC Aquatic ecosystem	*284.7 mg/kg (Fresh water sediment)* *284.7 mg/kg (Marine water sediment)*
PNEC Terrestrial ecosystem	*22.5 mg/kg (Soil)*
108-94-1 cyclohexanone	
PNEC Aquatic ecosystem	*0.033 mg/l (Fresh water)* *0.0033 mg/l (Marine water)* *10 mg/l (Sewage treatment)*
PNEC Aquatic ecosystem	*0.168 mg/kg (Fresh water sediment)* *0.017 mg/kg (Marine water sediment)* *0.014 mg/kg (Soil)*
109-99-9 tetrahydrofuran	
PNEC Aquatic ecosystem	*4.32 mg/l (Fresh water)* *21.6 mg/l (Intermittent release)* *0.432 mg/l (Marine water)* *4.6 mg/l (Sewage treatment)*
PNEC Aquatic ecosystem	*23.3 mg/kg (Fresh water sediment)* *2.33 mg/kg (Marine water sediment)* *2.1 mg/kg (Soil)*

· ***Ingredients with biological limit values:***

78-93-3 butanone	
BMGV	*70 µmol/L* *Medium: urine* *Sampling time: post shift* *Parameter: butan-2-one*
108-94-1 cyclohexanone	
BMGV	*2 mmol/mol creatinine* *Medium: urine* *Sampling time: post shift* *Parameter: cyclohexanol*

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

· ***8.2 Exposure controls***
· ***Personal protective equipment:***
· ***General protective and hygienic measures:***
The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
Remove any clothing soiled by the product.
· ***Respiratory protection:***
Use suitable respiratory protective device in case of insufficient ventilation.
Recommended filter:
Filter A

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· ***Protection of hands:***

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***
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.

· ***For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:***
Neoprene gloves

· ***Eye protection:***

Tightly sealed goggles

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

SECTION 9: Physical and chemical properties

· ***9.1 Information on basic physical and chemical properties***	
· ***General Information***	
· ***Appearance:***	
Form:	*Fluid*
Colour:	*Colourless*
· ***Odour:***	*Characteristic*
· ***Odour threshold:***	*No data available.*
· ***pH-value:***	*Not applicable.*
· ***Change in condition***	
Melting point/freezing point:	*No data available.*
Initial boiling point and boiling range:	*65 °C*
· ***Flash point:***	*4 °C*
· ***Flammability (solid, gas):***	*Not applicable.*
· ***Ignition temperature:***	*230 °C*
· ***Decomposition temperature:***	*No data available.*
· ***Auto-ignition temperature:***	*Product is not selfigniting.*
· ***Explosive properties:***	*May form explosive peroxides.*
· ***Explosion limits:***	
Lower:	*1.1 Vol %*
Upper:	*12 Vol %*
· ***Oxidising properties***	*No data available.*
· ***Vapour pressure at 20 °C:***	*173 hPa*

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· **Density at 20 °C:**	0.95 g/cm³
· **Vapour density**	No data available.
· **Evaporation rate**	No data available.
· **Solubility in / Miscibility with water:**	Not miscible or difficult to mix.
· **Partition coefficient: n-octanol/water:**	No data available.
· **Viscosity:**	
Dynamic at 20 °C:	1,150 mPas
· **Solvent separation test:**	No data available.
· **Solvent content:**	
Organic solvents:	76.0 %
VOC (EC)	76.00 %
Solids content:	24.0 %
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** Violent reactions with strong alkalis and oxidising agents.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:**
Hydrogen chloride (HCl)
Carbon monoxide and carbon dioxide

*

SECTION 11: Toxicological information

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

· **LD/LC50 values relevant for classification:**		
78-93-3 butanone		
Oral	LD50	>2,193 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)
108-94-1 cyclohexanone		
Oral	LD50	2,070-2,110 mg/kg (mouse)
		1,890 mg/kg (rat)
Dermal	LD50	1,100 mg/kg (rabbit)
Inhalative	LC50/4 h	11 mg/l (rat)
109-99-9 tetrahydrofuran		
Oral	LD50	2,500 mg/kg (rat)
Inhalative	LC50/4 h	82.5 mg/l (rat)

· **Primary irritant effect:**
· **Skin corrosion/irritation**
Causes skin irritation.
· **Serious eye damage/irritation**
Causes serious eye damage.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

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· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity**
Suspected of causing cancer.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure**
May cause drowsiness or dizziness.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
78-93-3 butanone	
EC50 (48h)	308 mg/l (daphnia)
108-94-1 cyclohexanone	
EC50	820 mg/kg (daphnia)
109-99-9 tetrahydrofuran	
EC50	6,670 mg/kg (daphnia)

· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Disposal must be made according to official regulations.

· **European waste catalogue**	
08 04 09*	waste adhesives and sealants containing organic solvents or other hazardous substances

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN-Number**	
· **ADR/RID/ADN, IMDG, IATA**	UN1133
· **14.2 UN proper shipping name**	
· **ADR/RID/ADN**	1133 ADHESIVES, special provision 640D

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· **IMDG, IATA**	ADHESIVES
· **14.3 Transport hazard class(es)**	
· **ADR/RID/ADN**	
	
· **Class**	3 (F1) Flammable liquids.
· **Label**	3
· **IMDG, IATA**	
	
· **Class**	3 Flammable liquids.
· **Label**	3
· **14.4 Packing group**	
· **ADR/RID/ADN, IMDG, IATA**	II
· **14.5 Environmental hazards:**	Not applicable.
· **14.6 Special precautions for user**	Warning: Flammable liquids.
· **Danger code (Kemler):**	-
· **EMS Number:**	F-E,S-D
· **Stowage Category**	A
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR/RID/ADN**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **Transport category**	2
· **Tunnel restriction code**	D/E
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **UN "Model Regulation":**	UN 1133 ADHESIVES, SPECIAL PROVISION 640D, 3, II

SECTION 15: Regulatory information

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

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **Seveso category** P5c FLAMMABLE LIQUIDS
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5.000 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50.000 t
· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

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· ***15.2 Chemical safety assessment:*** *A Chemical Safety Assessment has not been carried out.*

*
SECTION 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***
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.

· ***Contact:*** *Drs. J.W. Diesveld*

· ***Abbreviations and acronyms:***
ADR: Accord européen sur le transport 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
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
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)
VOC: Volatile Organic Compounds (USA, EU)
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
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Skin Corr. 2: Skin corrosion/ irritation, Hazard Category 2
Eye Dam. 1: Serious eye damage/ eye irritation, Hazard Category 1
Carc. 2: Carcinogenicity, Hazard Category 2
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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