

Safety Data Sheet

In accordance with Regulation (EC) No. 1907/2006 and No. 453/2010

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

1.1. Product identifier

Trade name: **SVA-PE / Stahl Spin-in capsule polyester with styrene**

1.2. Relevant identified uses of substance or mixture and uses advised against

Chemical anchoring system for building industry

1.3. Details of the supplier of the safety data sheet

STAHL GmbHLutherstraße 54
73614 Schorndorf
Germany

Telephone number (Fax)

+49 7181 97772-0 +49 7181 97772-22

E-mail address of competent person
responsible for the SDSinfo@stahl-chempower.de

1.4. Emergency telephone number : 0048 661 970 365 (Monday-Friday: 8.00-16.00, English)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Commission Regulation (EC) No. 1272/2008:

Org. Perox. G		
Flam. Liq. 3	H226	Flammable liquid and vapour
Skin Sens. 1	H317	May cause an allergic skin reaction
STOT RE 2	H373	May cause damage to organs (hearing) through prolonged or repeated exposure (inhalation).

2.2. Label elements

GHS pictograms:



Signal word:

WarningHazard statements:

H226	Flammable liquid and vapour
H317	May cause an allergic skin reaction
H373	May cause damage to organs (hearing) through prolonged or repeated exposure (inhalation).
EUH208	Contains dibenzoyl peroxide and dicyclohexyl phthalate. May produce an allergic reaction.

Precautionary statements:

Prevention:

P273 Avoid release to the environment
 P280 Wear protective gloves/protective clothing/eye protection/face protection

Response:

P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P337+P313 If eye irritation persists: Get medical advice/attention.

Storage:

-

Disposal:

-

Dangerous substances:

Dibenzoyl peroxide
 Styrene
 Dicyclohexyl phthalate

2.3. Other hazards This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Section 3: : Composition/information on ingredients

3.1. Substances Not applicable

3.2. Mixtures

Product identifiers	Ingredient name	Content (% wt.)	Classification
			(EC) 1272/2008 [CLP]
Component A			
Index number: 601-026-00-0 CAS: 100-42-5 WE: 202-851-5	Styrene	< 8,0	Flam. Liq. 3, H226, STOS SE 3 H335, STOT RE 1 H372, Eye Irrit. 2 H319, Acute Tox. 4 H332, Skin Irrit. 2 H315, Asp. Tox. 1 H304
Component B			
Index number: 617-008-00-0 WE: 202-327-6 CAS: 94-36-0	Dibenzoyl peroxide	< 1,8	Org. Perox. B, H241; Eye Irrit. 2, H319; Skin Sens. 1, H317; Aquatic Acute 1, H400
CAS: 7778-18-9	Calcium sulphate	< 0,12	Not classified
WE: 201-545-9 CAS: 84-61-7	Dicyclohexyl phthalate	< 1,8	Skin Sens. 1, H317; Repr. 2, H361; Aquatic Chronic 3, H412

Additional information: For the wording of the listed phrases refer to section 16.

Section 4: First aid measures
4.1. Description of first aid measures

General notes: Remove/Take off immediately all contaminated clothing.

Following inhalation: Move the exposed individual to the fresh air and keep at rest in a position comfortable for breathing. If not breathing, breathing is irregular or respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. If unconscious, place in recovery position and get medical attention immediately. Contact toxicology center.

Following skin contact: Wash with plenty of soap and water. Remove contaminated clothing and shoes. In case irritation or any complaints occur, get medical attention and avoid further exposure.

Following eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Check for and remove any contact lenses. Get medical attention.

Following ingestion: Wash out mouth with water. Move the exposed individual to the fresh air and keep at rest in position comfortable for breathing. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low, so that the vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Loosen tight clothing (e.g. tie, belt). Get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Product can cause irritation to eyes, skin and respiratory system. It can also lead to skin sensitization. After exposure, symptoms can be delayed. Contact with eyes can result in eye erythema and excessive lacrimation. Exposure of inhalation routes can cause coughing. Prolonged exposure of skin can cause erythema. Lack of data on symptoms occurring after ingestion.

4.3. Indication of any immediate medical attention and special treatment needed

In case of inhalation of decomposition products, symptoms may be delayed. Exposed individual may need to be kept under medical surveillance for 48 hours.

Section 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Use dry chemical (ABC powder) or CO₂, optionally spray mist water.

Unsuitable extinguishing media: Unknown

5.2. Special hazards arising from the substance or mixture

In case of exposition on an open flame, a pressure rise and a packaging may explode. Moreover, hazardous decomposition products can arise: e.g. carbon oxides, unidentified hydrocarbons.

5.3. Advice for firefighters

Use full protective clothing compliant with EN 469 standard. Wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face piece operated in positive pressure mode. Product containers exposed to heat cool with water.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

No action involving any health risk shall be taken through contact with product. Avoid contact with product without personal protective equipment, in case of contact with large quantities of product or ventilation is insufficient. Avoid breathing vapours.

For emergency responders:

Disposal of product spillage should be taken only if personal protective equipment described in section 8 is available.

6.2. Environmental precautions

Avoid dispersal of spilled material and its contact with soil, sewers, surface and ground water. Inform the relevant authorities if the product has caused environmental pollution.

6.3. Methods and material for containment and cleaning up

Secure drains and sewers. Collect product mechanically (e.g. with shovel) together with contaminated soil. Possible spillages absorb with inert, absorbent material (e.g. sand, earth, diatomaceous earth) and place in an appropriate waste disposal container according to local regulations. For further information see section 13

6.4. Reference to other sections

See section 8 for information on appropriate personal protective equipment.
See section 13 for additional waste treatment information.

Section 7: Handling and storage

7.1. Precautions for safe handling

Put on an appropriate personal protective equipment (see section 8). Persons with a history of skin sensitization problems should avoid contact with product. Do not allow product to contact eyes or skin. Avoid breathing vapours released during curing process. Use only in places with sufficient ventilation. Wear appropriate respirator when ventilation is inadequate. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Follow the manufacturer's instructions for use of product. Keep product in the original container. Do not use product after the expiration date.

7.2. Conditions for safe storage, including any incompatibilities

Store in original container, keep tightly closed when not in use. Protect from direct sunlight and other heat sources in dry, well-ventilated area, away from incompatible materials, food and drink. Store at 5– 25 °C. To ensure product stability avoid temperature fluctuation during storage (overheating and undercooling).

7.3. Specific end use(s) See Section 1

Section 8: Exposure controls/personal protection

8.1. Control parameters

Ingredient name	Long-term exposure		Short-term exposure		Comments
	mg/m ³	ppm	mg/m ³	ppm	
<u>Styrene:</u>					
Austria	85	20	340	80	
Belgium	216	50	432	100	
Denmark	105	25	105	25	
France	215	50	-	-	
Germany/Spain	86	20	172	40	
Hungary	50	-	50	-	
Ireland/Switzerland	85	20	170	40	
Latvia	10	-	30	-	
Sweden	43	10	86	20	
United Kingdom	430	100	1080	250	
USA (NIOSH)	215	50	425	100	
<u>Dibenzoyl peroxide:</u>					
Austria/Denmark	5	-	10	-	Inhalable aerosol
Belgium/France/USA (NIOSH)/United Kingdom	5	-	-	-	-
Germany/Hungary/Switzerland	5	-	5	-	Inhalable aerosol
<u>Dicyclohexyl phthalate</u>					

Austria/Ireland/United Kingdom	5	-	-	-	
Denmark	3	-	-	-	
<u>Calcium sulphate</u>					
Austria	5	-	10	-	Respirable aerosol
Belgium/Spain	10	-	-	-	
Germany (AGS)/Hungary	6	-	-	-	Respirable aerosol
Switzerland	3	-	-	-	Respirable aerosol

DN(M)ELs

Ingredient name	Route of exposure	Value	Group	Effect
Dibenzoyl peroxide	Oral	1,65 mg/kg	Consumers	Systematic, long-term
	Dermal	3,3 mg/kg	Consumers	Systematic, long-term
	Inhalation	6,6 mg/kg	Workers	Systematic, long-term
		2,9 mg/m ³	Consumers	Systematic, long-term
		11,75 mg/m ³	Workers	Systematic, long-term
Styrene	Inhalation	85 mg/m ³	Workers	Systematic, long-term
		289 mg/m ³	Workers	Systematic, short-term
		306 mg/m ³	Workers	Local, short-term
		10,2 mg/m ³	Consumers	Systematic, long-term
		174,25 mg/m ³	Consumers	Systematic, short-term
	Dermal	182,75 mg/m ³	Consumers	Local, short-term
		406 mg/kg	Workers	Systematic, long-term
		343 mg/kg	Consumers	Systematic, long-term
	Oral	2,1 mg/kg	Consumers	Systematic, long-term
	Dicyclohexyl phthalate	Inhalation	35,2 mg/m ³	Workers
35,2 mg/m ³			Workers	Systematic, short-term
0,87 mg/m ³			Consumers	Systematic, long-term
Dermal		0,5 mg/kg	Workers	Systematic, long-term
		0,25 mg/kg	Consumers	Systematic, long-term
Oral		0,25 mg/kg	Consumers	Systematic, long-term

PNECs

	Environmental protection target	Value
Dibenzoyl peroxide	Fresh water	0,602 µg/l
	Marine water	0,0602 µg/l
	Intermittent releases	0,602 µg/l
	Freshwater sediments	0,338 mg/kg
	Marine water sediments	0,0338 mg/kg
	STP	0,35 mg/l
	Soil	0,0758 mg/kg
Styrene	Fresh water	0,028 mg/l
	Marine water	0,014 mg/l
	Intermittent releases	0,04 mg/l
	Freshwater sediments	0,614 mg/kg
	Marine water sediments	0,307 mg/kg
	STP	5 mg/l
	Soil	0,2 mg/kg
Dicyclohexyl phthalate	Fresh water	0,00362 mg/l
	Marine water	0,000362 mg/l
	Intermittent releases	0,0362 mg/l
	Freshwater sediments	1,06 mg/kg
	Marine water sediments	0,106 mg/kg
	STP	10 mg/l

	Soil	0,21 mg/kg
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8.2. Exposure controls

Appropriate engineering controls: Ensure sufficient ventilation in working place. In case of insufficient ventilation use appropriate engineering controls (e.g. local fume hood) which will keep exposure level below recommended threshold, or use appropriate breathing apparatus.

Individual protective measures:

General recommendation: Obey hygiene rules: do not eat, drink, or smoke at workplace. Wash your hands with soap and water after you finish working with product. Avoid contamination of your clothes. Contaminated clothes wash before use.

Eye/face protection: Use safety glasses with side shields.

Hand protection: Use chemical resistant gloves standard when working with the product. It is advised to use butyl or nitrile rubber gloves.

Skin and body protection: Use protective clothes.

Respiratory protection: At concentrations causing irritation use mask, filter type: A – against organic gases and vapours.

Remarks: Advice on personal protection is applicable for high exposure levels. Select proper personal protection based on a risk assessment of the actual situation. Personal protective equipment must meet requirements of directive 89/686/CE.

Environmental exposure controls:

Do not allow to contaminate soil, sewage and surface/ ground water. If the product contaminates waterways and drains, alert the relevant authorities.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	Component A: liquid resin, Component B: solid powder
Color:	Component A – straw, Component B – white or red
Odour:	Characteristic, styrene-like
Odour threshold:	Not determined
pH:	Not determined
Melting point / freezing point:	Not applicable
Initial boiling point and boiling range:	Component A: styrene = 145 ⁰ C
Flash point:	Component A: < 40°C (PN-EN ISO 3679:2007)
Evaporation rate:	Not determined
Flammability (solid, gas):	Not applicable
Upper/lower flammability or explosive limits:	Not determined
Vapour pressure:	Not determined
Relative density:	component A: 1,1 [g/cm ³] (23°C)
Solubility:	Insoluble in water, partly soluble in acetone and isopropyl alcohol

Partition coefficient n-octanol/water:	Not determined
Auto-ignition temperature:	Component A: styrene = 490°C Component B: not self-igniting
Decomposition temperature:	Component A: no data Component B: SADT = 60°C
Dynamic viscosity (23 ⁰ C; 100 [s ⁻¹]):	Component A: 1,9 - 2,5 [Pa·s] (25°C)
Explosive properties:	Not determined
Oxidizing properties:	Component A: not applicable Component B: oxidizing properties

9.2. Other information No additional data

Section 10: Stability and reactivity

10.1. Reactivity

No specific data available

10.2. Chemical stability

Product is stable under normal storage conditions (temp. 5 - 25⁰C). In case of change of apparent consistency or presence of significant air amounts in components, it is advised to interrupt work with product and consult producer.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored under normal conditions of use.

10.4. Conditions to avoid

To avoid thermal degradation of product do not allow to overheat it over the temperature of recommended storage. Protect from sunlight. Overheating of B component over SADT temperature (Self Accelerating Decomposition Temperature, see section 9.1) can cause spontaneous decomposition of the substances in the packaging during transport.

10.5. Incompatible materials

No specific data.

10.6. Hazardous decomposition products

Unidentified hydrocarbons, carbon oxides.

Section 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Based on available data, the classification criteria are not meet

Ingredient name	Route of exposure	Species	Result
Styrene	LD ₅₀ (oral)	rat	5000 mg/kg
	LD ₅₀ (dermal)		>2000 mg/kg
Dibenzoyl peroxide	LD ₅₀ (oral)	rat	>5000 mg/kg
Dicyclohexyl phthalate	LD ₅₀ (oral)	rat	>2000 mg/kg

Irritation / Corrosivity

Based on available data, the classification criteria are not meet

Sensitisation Product causes skin sensitisation (based on available data for ingredients the product)

Ingredient name	Test	Species	Results	Effects
Dibenzoyl peroxide	LLNA	mouse	SI > 3	Skin Sens. 1

Repeated dose toxicity Product may cause damage to organs (hearing) through prolonged or repeated exposure (inhalation) (based on available data for ingredients the product)

CMR No specific data

Information on likely routes of exposure:

Inhalation	Irritating to respiratory system
Skin exposure	Irritating. May cause sensitization
Eye exposure	Irritating to eyes
Ingestion	Irritates mouth, throat and stomach

Symptoms related to the physical, chemical and toxicological characteristics:

Inhalation:	Vapours released during curing process may cause respiratory tract irritation, coughing, nausea and dizziness. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin exposure:	Irritation and redness. May cause sensitization by skin contact. Skin reaction may be delayed in time.
Eye exposure:	pain, lacrimation, irritation and redness
Ingestion:	No specific data

Section 12: Ecological information

12.1. Toxicity

Ingredient name	Dose / time of exposure / method	Species	Results
Dibenzoyl peroxide	LC ₅₀ / 96h / OECD 203	<i>Oncorhynchus mykiss</i>	0,0602 mg/L
	EC ₅₀ / 48h / OECD 202	<i>Daphnia magna</i>	0,110 mg/L
	EC ₅₀ (growth rate) / 72h / OECD 201	<i>Pseudokirchnerella subcapitata</i>	0,0711 mg/L
Styrene	LC ₅₀ /96d	<i>Pimephales promelas</i>	4,02 mg/L
	LC ₅₀ /21d/ OECD 211	<i>Daphnia magna</i>	>3,84 mg/L
	EC ₅₀ /96h / EPA OTS 797.1050	<i>Pseudokirchnerella subcapitata</i>	6,3 mg/L

12.2. Persistence and degradability

Dibenzoyl peroxide	Degr. 68% after 28 days. Readily biodegradable (OECD 301 D)
Styrene	Degr. 90% after 28 days. Readily biodegradable

12.3. Bioaccumulative potential

Dibenzoyl peroxide	log K _{ow} = 3,2
Styrene	BCF = 13,5 (<i>Carassius auratus</i>). Low bioaccumulative potential

12.4. Mobility in soil

Dibenzoyl peroxide	log K _{oc} = 3,8 (OECD 121)
Styrene	log K _{oc} = 2,71. Low mobility in soil

12.5. Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6. Other adverse effects

No reports on other adverse effects

Section 13: Disposal considerations

13.1. Waste treatment methods







Product: Minimum waste quantities. Must not be disposed together with household garbage. Do not allow product to reach sewage system, ground water and water course. Uncured product dispose of as a chemical waste in licensed facility, in accordance with local regulations of environmental protection and binding legislation on recycling. It is recommended to incinerate wastes arose during product usage in a proper incineration oven. Small quantities of both components may be reacted together, allowed to cure and dispose of as a solid waste.

Packaging: Used product packaging (cartridge) may be delivered to plastic waste recycling plant. Contaminated package must be disposed like wastes arose during product usage.

European Waste Code: 08 04 09* – Waste adhesives and sealants containing organic solvents or other dangerous substances. 16 09 03* – Peroxides

Legal basis: Council Directive 2008/98/EC on waste and European Parliament and Council Directive 94/62/EC on packaging and packaging waste. Regulation (EC) No 1013/2006 of 14 June 2006 on shipments of waste.

Section 14: Transport information

	Land transport ADR /RID	Maritime transport IMDG	Air transport IATA
14.1. UN number	UN 3269	UN 3269	UN 3269
14.2. UN proper shipping name	POLYESTER RESIN KIT	POLYESTER RESIN KIT	POLYESTER RESIN KIT
	In road transport it is required to use PSN in language of country of origin and also in one of the following : English, French and German. In maritime transport it is preferable to use English. In air transport English is obligatory.		
14.3. Transport hazard class(es)	3	3	3
14.4. Packing group	III	III	III
Label number:	3 	3 	3 Flammable Liquids 
Packaging instruction:	P302	P302	<u>Passenger and cargo aircraft:</u> - Ltd Qty (Pkg Inst.: Y960; Max Net Qty/Pkg: 1kg); -Pkg Inst.: 960; Max Net Qty/Pkg: 10kg <u>Cargo aircraft only:</u> -Pkg Inst.: 960; Max Net Qty/Pkg: 10kg
Limited quantities (LQ):	5L 	5L 	1kg 
Excepted quantities:	E 0 Note: Based on special provision 340 excepted	E 0 Note: Based on special provision 340 excepted	E 0 Note: Based on special provision 340 excepted

	quantities which do not exceed the quantity limits for excepted quantities applicable to UN 1866 may be transported in accordance with regulations of E 2 code.	quantities which do not exceed the quantity limits for excepted quantities applicable to UN 1866 may be transported in accordance with regulations of E 2 code.	quantities which do not exceed the quantity limits for excepted quantities applicable to UN 1866 may be transported in accordance with regulations of E 2 code.
Transport category:	3	3 (transport multimodal only)	3 (transport multimodal only)
Tunnel restriction code:	E	3 (transport multimodal only)	3 (transport multimodal only)
Special provisions:	236,340	236, 340	A 163
Storage and segregation:	Not applicable	Category A	Not applicable
EmS:	Not applicable	F-A, S-P	Not applicable
ERG:	Not applicable	Not applicable	5L
14.5. Environmental hazards	Not applicable	Not applicable	Not applicable
14.6. Special precautions for use	No specific data	No specific data	No specific data
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable	Not applicable	Not applicable

Section 15: Regulatory information

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

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

Regulation (EC) No 1272/2008 of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC and amending regulation (EC) No 1907/2006 (text with EEA relevance).

Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) (text with EEA relevance).

European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste.

Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste.

Commission Regulation (EC) No. 790/2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No. 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures.

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives.

Council Directive 89/686/EEC of 21 December 1989 on the approximation of the laws of the Member States relating to personal protective equipment (and its amendments).

15.2. Chemical safety assessment

Not applicable

Section 16: Other information

Full text of H-statements:

H226	Flammable liquid and vapour
H241	Heating may cause a fire or explosion
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H373	May cause damage to organs (hearing) through prolonged or repeated exposure (inhalation)
H400	Very toxic to aquatic life
EUH208	Contains dibenzoyl peroxide and dicyclohexyl phthalate. May produce an allergic reaction.

Hazard class:

Acute Tox. 4	Acute toxicity category 4
Eye Irrit. 2	Eye irritation category 2
Skin Irrit. 2	Skin irritant category 2
Skin Sens. 1	Skin sensitization category 1
Aquatic Acute 1	Aquatic acute category 1
Org. Perox. B	Organic peroxide category B
Org. Perox. G	Organic peroxide category G
Flam. Liq. 3	Flammable Liquid category 3
Repr. 2	Reproductive category 2

Acronyms and abbreviations

DNEL	Derived no-effect level
PNEC	Predicted No Effect Concentration
PBT	Persistent, bioaccumulative and toxicity substances
vPvB	Very persistent and very bioaccumulative substances
SADT	Self-accelerating decomposition temperature

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) No 1272/2008	Classification procedure
Skin Sens. 1, H317	Calculation method
Flam. Liq. 3	On basis of test data
STOT RE 2, H373	Calculation method
Org. Perox. G	On basis of test data

Alterations compared to the previous version Sections and subsections where changes have been made to the previous version of the safety data sheet: 2, 3, 8-12, 14, 15, 16.

Training advice: People using the product professionally, should be trained in handling the product, safety and hygiene. Drivers should be trained and obtain the appropriate certificate in accordance with the ADR requirements.

The information contained in the Safety Data Sheet is based on current state of knowledge and applies to product with its identified use. The information is intended to aid the user in controlling the handling risks and not to guarantee product quality. If conditions of product use are not under manufacturer control, responsibility for safe use falls to the user. Employer is obliged to inform all employees working with the product, about possible hazards and personal protection specified in Safety Data Sheet.