



Printing date 18.07.2018 Version number 2 Revision: 18.07.2018

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

- · 1.1 Product identifier
- · Trade name: Kleber SKL 65
- 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 Epoxy resin adhesive
- · 1.3 Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Spengler Fluorkunststoffe GmbH & Co. KG

Buchenring 20 D-42281 Wuppertal Tel.: +49 202 8702790 Fax: +49 202 8702786 Website: www.sp-ptfe.de

Website: www.sp-ptfe.de e-Mail: info@sp-ptfe.de • *Informing department:*

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• 1.4 Emergency telephone number: Phone +49 202 8702790

SECTION 2: Hazards identification

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



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



Skin Sens. 1

GHS07

Skin Irrit. 2 H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

· 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

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· Hazard pictograms







GHS05 GHS07 GHS0

· Signal word Danger

Hazard-determining components of labelling:

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

1,4-bis(2,3-epoxypropoxy)butane

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

Bis(2.3-epoxypropyl)terephthalate

tris(oxiranylmethyl)benzene-1,2,4-tricarboxylate

· Hazard statements

H315 Causes skin irritation.

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P102 Keep out of reach of children.
P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin

with water [or shower].

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.

P501 Dispose of contents/container in accordance with local / regional / national /

international regulations.

· 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 the substances listed below including additives not requiring identification.

· Dangerous components:		
CAS: 25068-38-6 NLP: 500-033-5 Reg.nr.: 01-2119456619-26-X	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700) Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	25 - 50%
CAS: 9003-36-5 NLP: 500-006-8 Reg.nr.: 01-2119454392-40-X	Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Skin Sens. 1, H317	10%
CAS: 2425-79-8 EINECS: 219-371-7 Reg.nr.: 01-2119494060-45-X	1,4-bis(2,3-epoxypropoxy)butane Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Skin Sens. 1A, H317; Aquatic Chronic 3, H412	< 2.5%

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CAS: 7195-44-0 EINECS: 230-565-0 Reg.nr.: 01-2119909640-43-X	Bis(2,3-epoxypropyl)terephthalate ♦ Eye Dam. 1, H318; ♦ Skin Irrit. 2, H315; Skin	ontd. from page 2) ≥ 1 - < 2.5%
CAS: 7237-83-4 EINECS: 230-638-7 Reg.nr.: 01-2119912714-41-X	tris(oxiranylmethyl)benzene-1,2,4-tricarboxylate Aquatic Chronic 2, H411; Eye Irrit. 2, H319;	< 2.5%

[·] 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 Instantly remove any clothing contaminated by the product.
- · After inhalation

Move person to fresh air.

Call a doctor immediately.

· After skin contact

Instantly wash with water and soap and rinse thoroughly.

In case of skin irritations or sensitizing effects, consult doctor.

· After eye contact

Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.

· After swallowing

Rinse out mouth and then drink plenty of water.

Instantly call for doctor.

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

Allergic reactions eye irritation

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

A symptomatic therapy is to be induced.

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- Suitable extinguishing agents

CO2, extinguishing powder or water spray. Fight larger fires with water spray.

- For safety reasons unsuitable extinguishing agents Water with a full water jet.
- · 5.2 Special hazards arising from the substance or mixture

Do not inhale smoke and combustion products.

During incomplete combustion carbon monoxide can be formed.

Can be released in case of fire:

Nitrogen oxides (NOx)

- 5.3 Advice for firefighters
- · Protective equipment: Wear self-contained breathing apparatus.
- Additional information

Collect contaminated fire fighting water separately. It must not enter drains. Provide sufficient fire fighting water retention.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation

Wear protective clothing.

· 6.2 Environmental precautions:

Do not allow product to reach sewage system or water bodies.

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Inform respective authorities in case product reaches water or sewage system.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).

Dispose of the material collected according to regulations.

· 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 information on disposal.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle container with care.

· Information about protection against explosions and fires:

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 containers:

Store only in unopened original containers.

- · 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 containers.

Storage between 2 and 40 ℃.

· 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- · 8.1 Control parameters
- · Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

DNELs		
25068-38-	6 reaction product: bisphenol-A-(epich molecular weight ≤ 700)	nlorhydrin) epoxy resin (number average
Oral	DNEL (consumer, short-term, systemic)	0.75 mg/kg bw/day (human)
	DNEL (consumer, long-term, systemic)	0.75 mg/kg bw/day (human)
Dermal	DNEL (worker, short-term, systemic)	8.33 mg/kg bw/day (human)
	DNEL (worker, long-term, systemic)	8.33 mg/kg bw/day (human)
	DNEL (consumer, short-term, systemic)	3.571 mg/kg bw/day (human)
	DNEL (consumer, long-term, systemic)	3.571 mg/kg bw/day (human)
Inhalative	DNEL (worker, short-term, systemic)	12.25 mg/m³ (human)
	DNEL (worker, long-term, systemic)	12.25 mg/m³ (human)
9003-36-5		oducts with 1-chloro-2,3-epoxypropane a
	phenol	
Oral	DNEL (consumer, long-term, systemic)	6.25 mg/kg bw/day (human)
Dermal	DNEL (worker, long-term, systemic)	104.15 mg/kg bw/day (human)
	DNEL (consumer, long-term, systemic)	62.5 mg/kg bw/day (human)
Inhalative	DNEL (worker, long-term, systemic)	29.39 mg/m³ (human)
	DNEL (consumer, long-term, systemic)	8.7 mg/m³ (human)
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PNECs	
25068-38-6 reaction product: bis molecular weight ≤ 7	phenol-A-(epichlorhydrin) epoxy resin (number average 00)
PNEC aqua (freshwater)	0.006 mg/L (.)
PNEC aqua (marine water)	0.0006 mg/L (.)
PNEC STP	10 mg/L (.)
PNEC soil	0.196 mg/kg soil dw (.)
PNEC sediment (freshwater)	0.996 mg/kg sedim. dw (.)
PNEC sediment (marine water)	0.0996 mg/kg sedim. dw (.)
PNEC aqua (intermittent releases)	0.018 mg/L (.)
PNEC oral	11 mg/kg food (.)
9003-36-5 Formaldehyde, oligom phenol	eric reaction products with 1-chloro-2,3-epoxypropane an
PNEC aqua (freshwater)	0.003 mg/L (.)
PNEC aqua (marine water)	0.0003 mg/L (.)
PNEC STP	10 mg/L (.)
PNEC soil	0.237 mg/kg soil dw (.)
PNEC sediment (freshwater)	0.294 mg/kg sedim. dw (.)
PNEC sediment (marine water)	0.0294 mg/kg sedim. dw (.)
PNEC aqua (intermittent releases)	0.0254 mg/L (.)

- · Additional information: The lists that were valid during the compilation were used as basis.
- · 8.2 Exposure controls
- Personal protective equipment
- · General protective and hygienic measures

Keep away from foodstuffs, beverages and food.

Take off all contaminated clothing immediately.

Do not eat or drink while working.

Do not inhale gases / fumes / aerosols.

Wash hands during breaks and at the end of the work.

Avoid contact with the eyes and skin.

· Breathing equipment:

Provide plenty of fresh air.

Use breathing protection in case of insufficient ventilation.

Filter P3.

· Protection of hands:



Protective gloves.

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

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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In case of a layer thickness of 0.33 mm the penetration time is longer than 480 minutes.

For the permanent contact gloves made of the following materials are suitable:

Chloroprene rubber, CR Nitrile rubber, NBR

Eye protection:

VOC EU



Tightly sealed safety glasses.

· Body protection: Impervious protective clothing

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and General Information	chemical properties
Appearance:	
Form:	Pasty
Colour:	Beige
Odour:	Light
Odour threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/freezing point:	Not determined
Initial boiling point and boiling range	e: > 200 ℃
Flash point:	110 ℃
Inflammability (solid, gaseous)	Not applicable.
lgnition temperature:	> 370 ℃
Decomposition temperature:	Not determined.
Self-inflammability:	Product is not selfigniting.
Explosive properties:	Product is not explosive.
Critical values for explosion:	
Lower:	Not determined.
Upper:	Not determined.
Vapour pressure at 20 ℃:	0.1 Pa
Density at 25 ℃	1.7 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
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
dynamic at 25 ℃:	200 - 700 Pas
kinematic:	Not determined.
Solvent content:	
Organic solvents:	

0 %

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· 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 No dangerous reactions known
- 10.4 Conditions to avoid No further relevant information available.
- · 10.5 Incompatible materials: Acids, bases, oxidizers.
- · 10.6 Hazardous decomposition products:

Carbon monoxide and carbon dioxide

Poisonous gases/vapours

Nitrogen oxides (NOx)

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 that are relevant	int for classification:
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25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Oral	LD50	> 2,000 mg/kg (rat) (OECD 420)
		19,800 mg/kg (rabbit)
Dermal	LD50	> 23.000 mg/kg (rabbit)

9003-36-5 Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

Oral	LD50	> 5,000 mg/kg (rat) (OECD 401)
Dermal	LD50	> 2,000 mg/kg (rat) (OECD 402)

- · Primary irritant effect:
- Skin corrosion/irritation

Causes skin irritation.

· Serious eye damage/irritation

Causes serious eye damage.

· Respiratory or skin sensitisation

May cause an allergic skin reaction.

· Repeated dose toxicity

25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Oral	NOAEL (9	90d)	50 mg/kg bw/day (rat) (OECD 408)
Dermal	NOAEL (9	90d)	100 mg/kg bw/day (mouse) (OECD 411)

9003-36-5 Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

Oral NOAEL (90d) 250 mg/kg bw/day (rat) (OECD 408)

- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · 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 Based on available data, the classification criteria are not met.
- · STOT-single exposure Based on available data, the classification criteria are not met.
- · STOT-repeated exposure Based on available data, the classification criteria are not met.

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· Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity:

25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

EC50 (static) 2.7 mg/l/48h (Daphnia magna) (EPA-660/3-75-009)

LC50 220 mg/l/96h (Algae)

1.75 mg/l/96h (Oncorhynchus mykiss) (OECD 203)

9003-36-5 Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

EC50 (static) > 1,000 mg/l/48h (Daphnia magna) (OECD 202)
LC50 > 1,000 mg/l/96h (Oncorhynchus mykiss) (OECD 203)

- 12.2 Persistence and degradability No further relevant information available.
- Other information: There are no data available about the preparation.
- 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 2 (German Regulation) (Self-assessment): hazardous for water.

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

Danger to drinking water if even small quantities leak into soil.

- · 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 be specially treated under adherence to official regulations.

The waste code numbers mentioned are recommendations based on the probable use of the product.

· Europear	n waste catalogue
08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 04 00	wastes from MFSU of adhesives and sealants (including waterproofing products)
08 04 09*	waste adhesives and sealants containing organic solvents or other dangerous substances

- · Uncleaned packagings:
- · Recommendation:

Non contaminated packagings can be used for recycling.

Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

Packagings that cannot be cleaned are to be disposed of in the same manner as the product.

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SECTION 14: Transport information	
· 14.1 UN-Number · ADR, IMDG, IATA	UN3082
· 14.2 UN proper shipping name · ADR	3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
· IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT
· IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
· 14.3 Transport hazard class(es)	
· ADR	
· Class	9 (M6) Miscellaneous dangerous substances and articles.
· Label · IMDG, IATA	9
· Class	9 Miscellaneous dangerous substances and articles.9
· 14.4 Packing group · ADR, IMDG, IATA	III
14.5 Environmental hazards:	Product contains environmentally hazardous substances: EPOXY RESIN
· Marine pollutant:	Yes Symbol (fish and tree)
· Special marking (ADR): · Special marking (IATA):	Symbol (fish and tree) Symbol (fish and tree)
14.6 Special precautions for user	Warning: Miscellaneous dangerous substances and articles.
Kemler Number:EMS Number:Stowage Category	90 F-A,S-F A
· 14.7 Transport in bulk according to Ani of Marpol and the IBC Code	nex II Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml (Contd. on page 10

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· Transport category	3
· Tunnel restriction code	<u> </u>
· UN "Model Regulation":	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

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 E2 Hazardous to the Aquatic Environment
- Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t
- · Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- · National regulations
- · Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.
- · Substances of very high concern (SVHC) according to REACH, Article 57

None of the ingredients is contained.

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

SECTION 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

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

· Department issuing data specification sheet:

This Material Safety Data Sheet has been drawn up in cooperation with:

DEKRA Assurance Services GmbH, Hanomagstr. 12, D-30449 Hanover, Germany,

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Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

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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 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 1

Skin Sens. 1: Skin sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Skin Sens. 1A: Skin sensitisation - Category 1A

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard - Category 2 Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard - Category 3

* Data compared to the previous version altered.