SAFETY DATA SHEET

according to 1907/2006/EG, Article 31

SECTION 1 Designation of the substance or mixture and of the company

1.1 Product identifier

Trade name: Resist 2K Component A
UFI: HD40-606P-Y00G-KWTJ

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

Relevant identified use**:** Fuel resistant asphalt sealant
Uses advised against: No data available

1.3 Details of the supplier providing the safety data sheet

Manufacturer/supplier:
Company
VIALIT ASPHALT GesmbH & Co KG
Reiterstrasse 78
A - 5280 Braunau/ Inn

Telephone: +43 (0)7722/ 62977 - 0
Fax: +43 (0)7722/ 65758

Department providing information: Laboratory department, telephone: +43 (0)7722/ 62977 - 44;
Qualitaet@vialit.at
This number is only manned during office hours.

1.4 Emergency information

For Austria: Poisoning Information Centre, telephone: +43 (0)1/ 4064343

SECTION 2 Possible hazards *

2.1 Classification according to Regulation 1272/2008/EG (CLP)

Special hazard warnings:

H-sets:
H315
H317
H318
H360F
H412
EUH205

P-sets:
P233
P381
P280
P308+P311
P273

Other information

Full text of the codes, hazard statements and EU hazard statements in SECTION 16.

2.2 Labelling elements (Regulation 1272/2008/EC (CLP))

Signal word: Hazard

Hazard warnings:

H315:	Causes skin irritation.
H317:	May cause allergic skin reactions.
H318:	Causes severe eye damage.
H360F:	May affect fertility.
H412:	Harmful for water organisms, with long-term effect.
EUH205:	Contains epoxy-containing compounds. May cause allergic reactions.

Prevention:

P260:	Do not inhale vapour / aerosol.
P262:	Do not get in eyes, on skin or on clothing.
P280:	Wear protective gloves/protective clothing/ eye protection/ face shield.
P308+P311:	In case of exposure or if affected: call poison control centre, doctor or ...
P273:	Avoid release to the environment.

Contains:
Bisphenol-A-epichlorohydrin resins with average molecular weight <= 700
1,4-bis(2,3-epoxypropoxy)butane
Ethanol
Benzyl alcohol
Oxirane

2.3 Other hazards

PBT: not applicable.
vPvB: not applicable.
Endocrine disrupting properties: not applicable

SECTION 3 Composition/ information on ingredients *

3.1 Materials

Not applicable, product is a mixture

3.2 Mixture

Hazardous ingredients:

Ingredient	(REGULATION (EC) No 1272/2008)	CAS number EINECS number REACH registration number
< 27% bisphenol-A-epichlorohydrin resins with average molecular weight <= 700	Eye irrit. 2 ; H319 Skin irrit. 2 ; H315 Skin sens. 1 ; H317 Aquatic chronic 2 ; H411	25068-38-6 500-033-5 01-2119456619-26-xxxx
< 7% 1-4-Bis(2,3-epoxypropoxy)butane	Acute tox 4; H332 Acute tox 4: H312 Acute tox 4: H302 Eye dam. 1; H318 Skin irrit. 2 ; H315 Skin sens. 1 ; H317 Aquatic chronic 3 ; H412	2425-79-8 219-371-7 01-2119494060-45-xxxx

< 3% benzyl alcohol	Acute tox 4; H332 Acute tox 4: H302 Eye irrit. 2 ; H319	100-51-6 202-859-9 01-2119492630-38-xxxx
< 2.5% Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	Skin irrit. 2 ; H315 Skin sens. 1 ; H317 Repr. 1B; H360F	68609-97-2 271-846-8 01-2119485289-22-xxxx

SECTION 4 First-aid measures *

4.1 Description of first aid measures

General information:
Always assess the safety of the accident site before attempting to rescue casualties and provide first aid.

After inhalation:
Fresh air supply, consult a doctor in case of complaints.

After contact with skin:
Wash off immediately with soap and water and rinse thoroughly. Remove wet clothing, use skin protection ointment. If skin irritation persists, consult a doctor.

After contact with eyes:
Rinse opened eye for 15 minutes under running water and consult a doctor.

After ingestion:
Do not induce vomiting. Drink water in small sips (dilution effect). Consult a doctor.

Self-protection of the first aider:
No special instructions required.

4.2 Most important symptoms and effects, both acute and delayed

Irritating to the skin. Causes severe eye damage. May cause sensitisation through skin contact.

4.3 Information on immediate medical assistance or specialised treatment

No information available

SECTION 5 Firefighting measures

5.1 Extinguishing agent

Suitable extinguishing agents:
Foam, powder, water in spray jet

Unsuitable extinguishing agents:
Full water jet

5.2 Special hazards arising from the substance or mixture.

Carbon monoxide, carbon dioxide, nitrogen oxides and other hazardous decomposition products may be formed during combustion.

5.3 Instructions for firefighting

Special firefighting procedures:
Do not allow run-off water from fire-fighting operations to enter waste water or watercourses.

Special protective equipment for firefighting:
Use self-contained breathing apparatus.

SECTION 6 Measures in the event of accidental release

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use respiratory protection in case of exposure to vapours/dust/aerosol.
Wear personal protective clothing.

6.2 Environmental protection measures

Do not allow to enter waterways or drains.

6.3 Methods and material for retention and cleaning

Pick up with sand or sawdust and shear off.
Cleaning can be carried out with biodiesel or similar cleaning agents.

6.4 Reference to other sections

See Section 13 for information on disposal.

SECTION 7 Handling and storage

7.1 Protective measures for safe handling

Measures for preventing fires:

Keep away from direct sources of ignition.

Measures for preventing aerosol and dust formation:

Not relevant for this product.

Measures for protecting the environment:

Do not allow to enter waterways or drains.

Advice on general hygiene in the workplace:

Keep away from food and drink, do not eat, drink or smoke while working;
Wash hands before breaks and after work

7.2 Conditions for safe storage in consideration of incompatibilities

Technical measures and storage conditions:
Dry and cool storage

Packaging materials:
Original container

Requirements for storage rooms and containers:
Keep material locked away.

Storage instructions:
No known intolerances.

Storage class:
10 according to VCI

Substances to be avoided:
Not relevant under normal storage conditions

Further information on storage conditions
Keep material well sealed.

7.3 Specific end uses

Specific use(s): 1.2; no further relevant information available.

SECTION 8 Exposure controls / personal protective equipment

8.1 Parameters to be monitored

Substance name: 1,4-Bis(2,3-epoxypropoxy)butane
CAS No.: 2425-79-8
MAK: see Section IV

Substance name: Benzyl alcohol
CAS No.: 100-51-6
MAK: see Section .IIb

Derived no-effect level (DNEL) according to Regulation (EC) No 1907/2006

Substance name	Area of application	Exposure routes	Value
Bisphenol-A-epichlorohydrin resins with average molecular weight <= 700	Worker	Contact with skin	8.3 mg/kg body weight/day
	Worker	Inhalation	12.3 mg/m3
1-4-Bis(2,3-epoxypropoxy)butane (1,4 - butanediol diglycidyl ether)	Worker	Contact with skin	9.26 mg/kg body weight/day
	Worker	Inhalation	1.63 mg/m3
Benzyl alcohol	Worker	Contact with skin	9.5 mg/kg body weight/day
	Worker	Inhalation	22 mg/m3

Estimated no effect concentration (PNEC) according to Regulation (EC) No 1907/2006

Substance name	Environmental compartment	Value
Bisphenol-A-epichlorohydrin resins with average molecular weight <= 700	Fresh water	0.006 mg/l
	Sea water	0.0006 mg/l
1-4-Bis(2,3-epoxypropoxy)butane (1,4 - butanediol diglycidyl ether)	Fresh water	0.024 mg/l
	Sea water	0.0024 mg/l
Benzyl alcohol	Fresh water	1 mg/l
	Sea water	0.1 mg/l

8.2 Exposure controls and monitoring

Suitable technical control equipment:
No special requirements

Personal protective equipment:

Eye protection:	Safety goggles
Skin protection:	Suitable work clothing
Hand protection:	Protective gloves fluorocarbon rubber (Viton) or PVC, thickness > 0.5 mm
Respiratory protection:	Not required

Limitation and monitoring of environmental exposure:
Not applicable

SECTION 9 Physical and chemical properties *

9.1 Information on basic physical and chemical properties

Aggregate state	viscous
Colour	black
Odour	characteristic
Melting point/freezing point	n/d
Boiling point or start of boiling and boiling range	> 200 °C
Flammability	yes
Lower explosion limit	n/a
Upper explosion limit	n/a
Flash point	100 °C
Ignition temperature	n/d
Decomposition temperature	n/a
pH value	n/d
Kinematic viscosity	1428.6 – 5000 mm^2/s
Solubility	miscible with water
Partition coefficient n-octanol/water (log value)	n/a
Vapour pressure	n/a
Density and/or relative density	1.4 kg/m^3
Relative vapour density	n/d
Particle properties	n/a

n/d = not determined n/a = not applicable

9.2 Other information

No further safety-relevant information available

SECTION 10 Stability and reactivity *

10.1 Reactivity

No hazardous reactions are to be expected if used as intended.

10.2 Chemical stability

The product is stable under normal ambient conditions and under the temperature and pressure conditions to be expected during storage and handling.

10.3 Possibility of hazardous reactions

May react with amines, mercaptans and acids with strong heat development.
Reaction with strong oxidising agents possible.

10.4 Conditions to avoid

No conditions known to be avoided if handled as directed.

10.5 Incompatible materials

Oxidising agent. Acids.

10.6 Hazardous decomposition products

No hazardous decomposition products known, if handled as directed and moderately heated.

SECTION 11 Toxicological information *

11.1 Information on toxicological effects

Acute toxicity:
Based on available data, the classification criteria are not met.

Acute oral:

Triiron tetraoxide	LD50(rat):	5000 mg/kg
Bisphenol A epichlorohydrin resins:	LD50(rabbit): LD50(rat):	19800 mg/kg 11400 mg/kg
1,4-Bis(2,3-epoxypropoxy)butane:	LD50(rat):	1134 mg/kg
Benzyl alcohol	LD50(mouse) LD50(rat):	1040 mg/kg 1620 mg/kg
Oxirane, mono[(C12-14-alkyloxy) methyl] derivs.	LD50(rat):	> 5000 mg/kg

Acute dermal:

Bisphenol A epichlorohydrin resins:	LD50(rabbit):	20000 mg/kg
1,4-Bis(2,3-epoxypropoxy)butane:	LD50(rabbit):	> 2150 mg/kg
Benzyl alcohol	LD50(rabbit):	2000 mg/kg
Oxirane, mono[(C12-14-alkyloxy) methyl] derivs.	LD50(rat):	> 4500 mg/kg

Corrosive/irritant effect on the skin:
Causes skin irritation.
Causes severe eye damage.

Severe eye damage/irritation:
Causes severe eye damage.

Sensitisation of the respiratory tract/skin:
May cause allergic skin reactions.

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:
May damage fertility.

Specific target organ toxicity at single exposure:
Based on available data, the classification criteria are not met.

Specific target organ toxicity with repeated exposure:
Based on available data, the classification criteria are not met.

Danger of aspiration:
Based on available data, the classification criteria are not met.

11.2 Further information:

The classification was carried out according to the calculation method of the Preparations Directive.

SECTION 12 Environmental information

12.1 Toxicity

No further relevant data available

Fish toxicity:

Bisphenol-A-epichlorohydrin resins:	LC50(Oncorhynchus mykiss) 96h:	1.3 mg/l
1,4-Bis(2,3-epoxypropoxy)butane:	LC50(golden orfe) 96h:	18 mg/l
Benzyl alcohol:	LC50(Lepomis macrochirus)96h:	10 mg/l
	LC50(golden orfe)96h:	645 mg/l
	LC50(Pimephales promelas)96h:	460 mg/l
Oxirane, mono[(C12-14-alkyloxy) methyl] derivs.	LC50(Oncorhynchus mykiss) 96h:	1800 mg/l

Daphnia toxicity:

Bisphenol-A-epichlorohydrin resins:	EC50(Daphnia magna)48h:	2.8 mg/l
1,4-Bis(2,3-epoxypropoxy)butane:	EC50(Daphnia magna)24h:	76 mg/l
Benzyl alcohol:	EC50(Daphnia magna)24h:	400 mg/l

Algal toxicity:

Bisphenol-A-epichlorohydrin resins:	EC50(Algae Scenedesmus sp.)96h:	220 mg/l
1,4-Bis(2,3-epoxypropoxy)butane:	LC50(Pseudokirchnerilla subcapitata)72h:	160 mg/l
Benzyl alcohol:	EC50(Algae Scenedesmus sp.)96h:	640 mg/l
	EC50(Scenedesmus quadricauda)3h:	79 mg/l
Oxirane, mono[(C12-14-alkyloxy) methyl] derivs.:	EC50(Algae)72h:	844 mg/l

Bacterial toxicity:

Bisphenol-A-epichlorohydrin resins:	EC50(Leuciscus idus)96h:	3.6 mg/l
Benzyl alcohol:	EC50(Pseudomonas putida)16h:	> 658 mg/l
	EC50(Photovacterium phosphoreum)0.5h:	71.42 mg/l
	EC50(Pseudomonas putida)0.5h:	400 mg/l
Oxirane, mono[(C12-14-alkyloxy) methyl] derivs.:	EC50	> 100 mg/l

12.2 Persistence and degradability

No further relevant data available

Bisphenol-A-epichlorohydrin resins:	12% with an exposure time of 28 days. OECD Test 302B
Benzyl alcohol:	92 - 96% with exposure time of 14 days. OECD Test 301C

12.3 Bioaccumulative potential

No further relevant data available

Bisphenol-A-epichlorohydrin resins:	Moderate, log Pow: 3.242 (estimated)
1-4-Bis(2,3-epoxypropoxy)butane (1,4 - butanediol diglycidyl ether:	Low, log Pow: -0.15 (estimated)
Benzyl alcohol:	Low, log Pow: 1.10 (measured)

12.4 Mobility in soil

No further relevant data available

12.5 Results of the PBT and vPvB assessment

No further relevant data available

12.6 Endocrine disrupting properties

No further relevant data available

12.6 Other adverse effects

Water hazard class 2 (according to calculation rule for preparations AwSV)

SECTION 13 Notes on disposal

Product:	Do not dispose of via household waste or sewer, hand over to a hazardous waste collector.
Packaging:	Disposal in accordance with official regulations.
Waste code:	ÖNORM 2100, code number 55 903 EN waste catalogue: 08 04 09

SECTION 14 Transport details

14.1 UN number

Not applicable.

14.2 UN proper shipping name

Not applicable.

14.3 Transport hazard classes

Not applicable.

14.4 Packaging group

Not applicable.

14.5 Environmental hazards

Not applicable.

14.6 Special precautions for the user

Not applicable.

14.7 Transport of bulk cargo by sea in accordance with IMO instruments

Not applicable.

SECTION 15 Legal regulations

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

National regulations

REACH Regulation (EC) No. 1907/2006 as amended
CLP Regulation (EC) No 1272/2008 as amended
Water hazard class (Germany):WgK 2 (slightly hazardous to water)

15.2 Chemical safety assessment

No chemical safety assessment has been carried out for this product.

SECTION 16 Other information

The information is based on the current state of knowledge and experience. This data sheet describes products with regard to safety requirements. The information does not have the meaning of a guarantee of properties.

Clear indication of changes:

Changes to the previous version are marked with the asterisk * in the right-hand margin.

Abbreviations and acronyms

(Q)SAR = Quantitative structure-activity relationship
ADN = European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR = Agreement on the International Carriage of Dangerous Goods by Road
AGW = limit value for exposure at the workplace
ASTM = International Standards Institute
ATE = acute toxicity estimate
AwSV = Ordinance on Installations for Handling Substances Hazardous to Water
BCF = bioconcentration factor
BGW = biological limit value
CAS No. = Chemical Abstracts Service Number
CLP = classification, labelling and packaging
Classification, labelling and packaging
CMR = carcinogen, mutagen or reproductive toxin
CSA = chemical safety assessment
CSR = chemical safety report
DMEL = derived exposure level with minimal impairment
DNEL = derived exposure level without impairment
EC50 = The effective concentration of a substance that causes 50% of the maximum possible reaction.
EC number = EINECS and ELINCS number (see also EINECS and ELINCS)
EINECS = European Inventory of Existing Commercial Substances
EL50 = effective level 50%
IATA = International Air Transport Association
IC50 = inhibitory concentration 50%
ICAO-TI = Technical Instructions for the Carriage of Dangerous Goods by Air
IMDG = International Maritime Dangerous Goods Code
Kow = octanol-water partition coefficient
Koc = organic soil carbon to water partition coefficient
LC50 = lethal concentration for 50% of a test population
LD50 = lethal dose for 50% of a test population (median lethal dose)
LGK = storage class
LL50 = lethal load 50%
LOAEC = lowest concentration with observable adverse effect
LOAEL = lowest observed adverse effect level
MAK = maximum workplace concentration
NOAEC = concentration with no observable adverse effect

NOAEL = dose with no observable adverse effect
NOEC = highest exposure concentration of a substance without observed effects
NOEL = highest dose of a substance with no observed effects
OECD = Organisation for Economic Co-operation and Development
PBT = persistent, bioaccumulative and toxic substance
PEC = estimated effect concentration
PNEC = estimated no-effect concentration
RID = Regulations on the International Carriage of Dangerous Goods by Rail
QSAR = Quantitative/Qualitative Structure-Effect Relationship
SVHC = substances of very high concern
STEL = maximum workplace concentration (MAK) - short-term value
TLV = maximum workplace concentration (MAK)
TRGS = Technical Rules for Hazardous Substances
TWA = maximum workplace concentration (MAK) - daily average value
UVCB = substances with unknown or variable composition, complex reaction products and biological materials
VCI = German Chemical Industry Association
vPvB = very persistent and very bioaccumulative

Important literature references and data sources:

Information from our suppliers and data from the "Database of registered substances" of the European Chemicals Agency (ECHA) were used to prepare this safety data sheet.

Methods used for product categorisation:

The classification for health, physico-chemical and environmental hazards was derived from a combination of calculation methods and, if available, test data.

Full text of the H & P phrases referred to in items 2 and 3:

H302:	Harmful if ingested.
H312:	Harmful in contact with skin.
H315:	Causes skin irritation.
H317:	May cause allergic skin reactions.
H318:	Causes severe eye damage.
H319:	Causes serious eye irritation.
H332	Harmful if inhaled.
H411:	Toxic to water organisms, with long-term effect.
H412:	Harmful for water organisms, with long-term effect.
EUH205:	Contains epoxy-containing compounds. May cause allergic reactions.

Notes on training courses:

Workers must be regularly trained in the safe handling of the products based on the information in the safety data sheet and the local conditions of the workplace.
National regulations on the training of employees in the handling of hazardous substances must be observed.