



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

1.1. Product Identifier

Product Form : Mixture
 Product Name : INDUBOUND VK4034 Comp. A
 Product Code : 0800000103
 Type of Product : Epoxy Product
 Product Group : Bonding-agent

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

1.2.1. Relevant identified Uses

Main use category : Professional Use
 Industrial/Professional use spec : For professional use only

1.2.2. Use advised against

No additional information is available

1.3. Details of the supplier of the safety data sheet

AQUAFIN Pakistan (Pvt.) Ltd.
 Steel House, West Wharf Road,
 Karachi, 74000, Pakistan
 T: +92 0330 8694794
info@aquafinpakistan.com www.aquafinpakistan.com

1.4. Emergency telephone number

Country	Organization/Company	Address	Emergency Number	Comment
N/A	N/A	N/A	N/A	N/A

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]Mixture: SDS < 2015: Show CLP information only

Skin irritation, Category 2 H315
 Skin sensitization, Category 1 H317
 Eye irritation, Category 2A H319
 Carcinogenicity, Category 2 H351
 Reproductive toxicity, Category 1B H360F
 Aquatic hazard (long-term), Category 3 H412

Adverse physicochemical, human health and environmental effects

No additional information is available.

For full text of H-phrases see section 16.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]
 Hazard pictograms (CLP)



GHS07 GHS08

Single word (CLP) : Danger.
 Hazard statements (CLP) : H315 - Causes skin irritation.
 H317 - May cause an allergic skin reaction.
 H319 - Causes serious eye irritation.
 H351 - Suspected of causing cancer.
 H360F - May damage fertility.
 H412 - Harmful to aquatic life with long lasting effects.
 Precautionary Statements (CLP) : P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
 P273 - Avoid release to the environment.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing 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.

P405 - Store locked up.

P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other Hazards

No additional information available.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable.

3.2. Mixture

Name	Product Identifier	%	Comments
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane	(CAS No.) 1675-4-3	10.0 – 25.0	Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 Aqua Chronic. 2, H411
Epoxy Phenol Novolak Resin	(CAS No.) 701-263-0	23	Skin Irrit. 2, H315 Aqua Chronic 2, H411
oxirane, mono[(C12-14-alkyloxy)methyl] derivs	(CAS No.) 68609-97-2	2.5 – 10.0	Skin Irrit. 2, H315 Skin Sens. 1, H317 Repr. 1B, H360F
Titanium dioxide	(CAS No.) 13463-67-7	1.0	Carc. 2, H351
Silicon dioxide filler	(CAS No.) 7631-86-9	5.0 – 10.0	
Liquid hydrocarbon polymer	(CAS No.) 69430-35-9	0.5	
Benzyl alcohol	(CAS No.) 100-51-6	1.0 – 2.0	
Silicon dioxide sand	(CAS No.) 14808-60-7	35.0 – 50.0	
Calcium carbonate	(CAS No.) 471-34-1	5.0 – 8.0	
Methanol	(CAS No.) 67-56-1	0.1 – 0.3	
Tetraalkyl ammonium bentonite	(CAS No.) 68953-58-2	0.1 – 0.2	

Full Text of H-statements: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General first-aid measures	: Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. Personal protection for the First Aider. It is possible to choke in case of vomiting in unconsciousness. Bring unconscious persons into a stable position on side. Keep the respiratory tract free (remove dentures and vomiting). Check the pulse. In case of heart failure you have to make a cardiac massage. In case of stoppage of breathing: artificial respiration. Take up a doctor immediately!
First-aid measures after eye contact	: Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.
First-aid measures after inhalation	: Supply fresh air or oxygen; call for doctor. In case of unconsciousness bring patient into stable side position for transport. Supply fresh air and call for doctor for safety reasons.
First-aid measures after skin contact	: In case of contact with skin, remove mechanically, wash thoroughly with plenty of soap and water. Instantly wash with water and soap and rinse thoroughly. Change immediately contaminated clothes.
First-aid measures after ingestion	: Drink copious amounts of water and provide fresh air. Instantly call for doctor. Do not induce vomiting; instantly call for medical help. Show the packaging or the label to the doctor.

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

Symptoms/injuries after eye contact	: No further relevant information available.
Symptoms/injuries after inhalation	: No further relevant information available.
Symptoms/injuries after skin contact	: No further relevant information available.
Symptoms/injuries after ingestion	: No further relevant information available.

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

No additional information is available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use dry chemical, CO₂, water spray (fog) or foam.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards as arising from the substance or mixture

Fire hazard : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

5.3. Advice for firefighters

Explosion hazard : Risk of dust explosion.
Reactivity : Upon combustion: CO, CO₂, NO and SO are formed.
Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Take account of environmentally hazardous fighting water.
Protection during firefighting : Do not enter the fire area without proper protective equipment, including respiratory protection.
Other information : None known.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Bring persons out of danger. Wear protective equipment. Keep unprotected persons away.

6.1.1. For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

6.1.2. For emergency responders

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2. Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3. Methods and material for containment and cleaning up

General measures : Pick up the product mechanically, and avoid dust formation.

6.4. Reference to other sections

Note: see Section 1 for emergency contact information and Section 13 for waste disposal. See headings 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Prevent the formation of dust. Keep out of the reach of children.
Hygiene measures : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.
Storage conditions : Please follow the rules of the VCI-Storage-Concept for chemicals.
Incompatible products : No information available.
Incompatible materials : No information available.
Storage area : Meet the legal requirements. Store in a cool area. Store in a well-ventilated place.
Special rules on packaging : Meet the legal requirements.

SECTION 8: Exposure controls/ personal protection

8.1. Control parameters

1317-65-3 Calciumcarbonat (10-25%)

WEL Long-term value: 10* 4** mg/m³
*inhalable dust; **respirable

13463-67-7 titanium dioxide (<1%)

WEL Long-term value: 10* 4** mg/m³
*total inhalable **respirable.

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information is available.

8.2.2 Personal protection equipment

Personal protective equipment:

Gloves. Safety glasses. Protective coating.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Nitrile rubber gloves. Breakthrough time: > 480 Min, (EN 374). Layer thickness: 0,35 mm. Always wash your hands after handling the product

8.2.2.3. Respiratory protection

Respiratory protection:

Ensure adequate air ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Universal mask (ABEK)

8.2.2.4. Thermal hazards

No additional information is available.

8.2.3. Environmental exposure controls

No additional information is available.

SECTION 9: Physical and chemical properties

9.1. Information

Physical state	: Viscous Liquid/Pasty.
Colour	: Grey.
Odour	: Characteristic.
Odour threshold	: No data available.
pH	: No data available.
pH solution	: /.
Relative evaporation rate (butylacetate=1)	: No data available.
Melting point	: No data available.
Freezing point	: No data available.
Boiling point	: /.
Flashpoint	: /.
Auto-ignition temperature	: /.
Decomposition temperature	: No data available.
Flammability (solid, gas)	: Not applicable.
Vapour pressure	: No data available.
Relative vapour density at 20 °C	: No data available.
Relative density	: No data available.
Density	: 1.40 kg/l @ 20°C
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available.
Viscosity, kinematic	: /.
Viscosity, dynamic	: /.
Explosive properties	: Not applicable.
Oxidising properties	: Not applicable.
Lower explosive limit (LEL)	: /.
Upper explosive limit (UEL)	: /.

9.1. Information

VOC content	: /.
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SECTION 10: Stability and reactivity

10.1. Reactivity

No further relevant information available.

10.2. Chemical stability

No further relevant information available.

10.3. Possibility of hazardous reactions

No further relevant information available.

10.4. Conditions to avoid

No further relevant information available.

10.5. Incompatible materials

No further relevant information available.

10.6. Hazardous decomposition products

No further relevant information available.

SECTION 11: Toxicological information

11.1. Information on toxicological effect

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Additional information	: See Heading 3 (information on ingredients)

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] Bisoxirane (CAS No. 1675-54-3)	
LD50 oral rat	15000 mg/kg body weight (Rat, Equivalent or similar to OCED 401; Experimental value)
LD50 dermal rabbit	23000 mg/kg body weight (Rabbit, Experimental value, Equivalent or similar to OCED 402)

Epoxy Phenol Novolak Resin (CAS No. 701-263-0)	
LD50 oral rat	>5000 mg/kg body weight (Rat, Equivalent or similar to OCED 401; Experimental value)
LD50 dermal rat	>2000 mg/kg body weight (Rabbit, Experimental value, Equivalent or similar to OCED 402)

Oxirane, mono[(C12-14-alkyloxy)methyl] derivs (CAS No. 68609-97-2)	
LD50 oral rat	>5000 mg/kg body weight (Rat, Equivalent or similar to OCED 401; Experimental value)
LD50 dermal rabbit	>4500 mg/kg body weight (Rabbit, Experimental value, Equivalent or similar to OCED 402)

Titanium dioxide (CAS No. 13463-67-7)	
LD50 oral rat	>5000 mg/kg body weight (Rat, Equivalent or similar to OCED 401; Experimental value)
LD50 dermal rabbit	>10000 mg/kg body weight (Rabbit, Experimental value, Equivalent or similar to OCED 402)
LC50 inhalation rat (mg/l)	6.8 mg/l/4h (Rat, Experimental value)

Skin corrosion/irritation	: Causes skin irritant. pH: /.
Serious eye damage/irritation	: Causes serious irritant. pH: /.
Respiratory or skin sensitization	: May cause allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: May damage fertility.
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology – general	: No data available.
Acute aquatic toxicity	: Very toxic to aquatic life.
Chronic aquatic toxicity	: Very toxic to aquatic life with long-lasting effects.

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] Bisoxirane (CAS No. 1675-54-3)	
LC50	2.0 mg/L (96h, for)
EC50 (static)	1.8 mg/l (48h, Daphnia magna)
ERC50 (static)	11 mg/l (72h, Scenedesmus capricornutum)
IC50	>42.6 mg/L (18h, bacterial toxicity)

Epoxy Phenol Novolak Resin (CAS No. 701-263-0)	
LC50	5.7 mg/l (96h, Leuciscus idus)
EC50	2.55 mg/l (48h, Daphnia magna)
EC50	1.8 mg/l (Senastrum capricornutum, OECD 202)
IC50 (static)	>100 mg/l (3h, activated sludge bacteria)

Oxirane, mono[(C12-14-alkyloxy)methyl] derivs (CAS No. 68609-97-2)	
LC50	>5000 mg/l (96h, rainbow trout)
EC50	7.2 mg/l (48h, Daphnia magna, OECD 202)
EC/L50	844 mg/l (72h, algae toxicity)
IC50 (static)	>100 mg/l (3h, activated sludge bacteria, OECD 209)
LC50	500 mg/l (72h, Pseudokirchneriella subcapitata)

Titanium dioxide (CAS No. 13463-67-7)	
LC0	48 mg/l (Leuciscus idus)
EC0	30 mg/l (Daphnia magna)
	24 mg/l (Pseudomonas fluorescens)

12.2. Persistence and degradability

INDUBOUND VK4034 Comp. A	
Persistence and degradability	No relevant information available.

12.3. Bioaccumulative potential

INDUBOUND VK4034 Comp. A	
Bioaccumulative potential	No further relevant information available.

12.4. Mobility in soil

INDUBOUND VK4034 Comp. A	
Mobility in soil	No supplementary information available.
Ecology - soil	No supplementary information available.

12.5. Results of PBT and vPvB assessment

No additional information available.

12.6. Other adverse effects

Additional information : No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
Waste treatment methods	: Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way.
Product/Packaging disposal recommendations	: Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

In accordance with ADR

14.1. UN number

UN-No. (ADR) : N/A

14.2. UN proper shipping name

Proper Shipping Name (ADR) : N/A
 Transport document description (ADR) : N/A

14.3. Transport hazard class(es)

ADR
 Transport hazard class(es) (ADR) : N/A
 Danger labels (ADR) : N/A
 : N/A

14.4. Packing Group

Packaging group (ADR) : N/A

14.5. Environmental hazards

Dangerous for the environment : Not classified
 Other information : Not classified

14.6. Special precautions for user

Special transport precautions : N/A

Hazard identification number (Kemler No.) : N/A

Tunnel restriction code (ADR) : D/E
Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No additional information available.

15.1.1. National Regulations

No additional information available.

15.2. Chemical safety assessment

No data available

SECTION 16: Other information

Full text of H- and EUH- statements:

H315	Causes skin irritation, Category 2
H317	May cause an allergic skin reaction., Category 1
H319	Causes serious eye irritation, Category 2a
H351	Suspected of causing cancer., Category 2
H360F	May damage fertility, Category 1B
H412	Harmful to aquatic life with long-lasting effects., Category 3
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing 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.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Safety Data Sheet (MSDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not, therefore, be construed as guaranteeing any specific property of the product.