



SAFETY DATA SHEET

Preferre 4050M

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

1.1 Product identifier

Product name : Preferre 4050M (Resin)
Product type : Liquid.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture : Adhesive, Woodworking industry.

1.3 Details of the supplier of the safety data sheet

Supplier : TS Resins Limited (Mold)
Alyn Works,
Denbigh Road,
Mold,
Flintshire
CH7 1BF
United Kingdom
Tel +44 (0)1352 757 657

e-mail address of person responsible for this SDS : gavin.ding@tsresins.co.uk

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : Not available.

Supplier

Telephone number : +44 (0) 1352 750 416

Hours of operation : Monday 06:00 to Saturday 06:00 GMT

SECTION 2: Hazard Identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : R10
Xn; R22
Xi; R36/38
R43

Physical/chemical hazards : Flammable.

Human health hazards : Harmful if swallowed. Irritating to eyes and skin. May cause sensitisation by skin contact.
No known significant effects or critical hazards.
No known significant effects or critical hazards.

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

SECTION 2: Hazard Identification

2.2 Label elements

Hazard symbol or symbols :



Indication of danger : Harmful

Risk phrases :
 R10- Flammable.
 R22- Harmful if swallowed.
 R36/38- Irritating to eyes and skin.
 R43- May cause sensitisation by skin contact.

Safety phrases :
 S24- Avoid contact with skin.
 S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 S37- Wear suitable gloves.

Supplemental label elements : Not applicable.

Hazardous ingredients : formaldehyde

Special packaging requirements

Containers to be fitted with : Not applicable.
child-resistant fastenings

Tactile warning of danger : Not applicable.

2.3 Other hazards

Other hazards which do not result in classification : Not available.

SECTION 3: Composition/information on ingredients

Substance/mixture : Mixture

Chemical characterisation : Urea formaldehyde polymer.

Product/ingredient	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
ethanol	REACH #: 012119457610-43 EC: 200-578-6 CAS: 64-17-5 Index: 603-002-00-5	20 - 25	F; R11	Flam. Liq. 2, H225 Eye Irrit. 2, H319	[2]
resorcinol	REACH #: 012119480136-40 EC: 203-585-2 CAS: 108-46-3 Index: 604-010-00-1	5 - 10	Xn; R22 Xi; R36/38 N; R50	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 1, H370o STOT SE 2, H371o Aquatic Acute 1, H400	[1] [2]
sodium hydroxide	REACH #: 012119457892-27 EC: 215-185-5 CAS: 1310-73-2	0.5 - 2	C; R35	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318	[1] [2]

SECTION 3: Composition/information on ingredients					
Product/ingredient	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
Formaldehyde	REACH #: 01-2119488953-20 EC: 200-001-8 CAS: 50-00-0 Index: 605-001-00-5	0.2 - 1	67/548/EEC Carc. Cat. 3; R40 T; R23/24/25 C; R34 R43 See section 16 for the full text of the Rphrases declared above	Regulation (EC) No. 1272/2008 [CLP] Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335i See section 16 for the full text of the Rphrases declared above	[1] [2]
Methanol	REACH #: 01-2119433307-44 EC: 200-659-6 CAS: 67-56-1 Index: 603-001-00-	<3	F; R11 T; R23/24/25 R39/23/24/25	Flam Liq. 2, H225 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 STOT SE 1, H370	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Move exposed person to fresh air. If breathing is difficult, give oxygen. Get medical attention if adverse health effects persist or are severe.
- Skin contact** : Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure.

SECTION 4: First aid measures

- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Get medical attention.
- General** : Move the victim to a safe area as soon as possible. If unconscious, place in recovery position and seek medical advice. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Allow the victim to rest in a well-ventilated area.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

- Eye contact** : Irritating to eyes.
- Inhalation** : Vapour may be irritating to eyes and respiratory system
- Skin contact** : May cause sensitisation by skin contact.
- Ingestion** : Harmful if swallowed. Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
irritation
watering
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed.
The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing : Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Flammable liquid. In a fire or if heated, a pressure increase will occur and the substance or mixture container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

SECTION 5: Firefighting measures

Hazardous combustion : products Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

5.3 Advice for firefighters

Special precautions for : Promptly isolate the scene by removing all persons from the vicinity of the incident if fire-fighters there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective : equipment for fire-fighters Fire-fighters should wear appropriate protective equipment and self contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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 spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also Section 8 for additional information on hygiene measures.

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).

6.3 Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Absorb with liquid-binding material (sand, diatomite, universal binders etc.) or use a spill kit. Use spark-proof tools and explosion-proof equipment.

Large spill : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Absorb with dry earth, sand or other non-combustible material. Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

6.4 Reference to other : section see section 1 for emergency contact information
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Use only with adequate ventilation. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general : occupational hygiene 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 Keep container tightly closed and sealed until ready for use. Use appropriate storage, including any containment to avoid environmental contamination. Store away from incompatible incompatibilities materials (see Section 10). Keep away from food, drink and animal feeding stuffs.

7.3 Specific end use(s)
Recommendations : Not available.
Industrial sector specific : Not available.
Solutions

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
ethanol	AOSH (Ireland, 8/2007). OELV-8hr: 1000 ppm 8 hour(s). OELV-8hr: 1900 mg/m ³ 8 hour(s).
resorcinol	NAOSH (Ireland, 8/2007). Absorbed through skin. OELV-8hr: 10 ppm 8 hour(s). OELV-8hr: 45 mg/m ³ 8 hour(s). OELV-15min: 20 ppm 15 minute(s). OELV-15min: 90 mg/m ³ 15 minute(s).
sodium hydroxide	NAOSH (Ireland, 8/2007). OELV-15min: 2 mg/m ³ 15 minute(s).
Formaldehyde	EH40/2005 WELs (United Kingdom (UK), 8/2007). STEL: 2,5 mg/m ³ 15 minute(s). STEL: 2 ppm 15 minute(s). TWA: 2 ppm 8 hour(s). TWA: 2,5 mg/m ³ 8 hour(s).

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Exposure limit values
Methanol	EH40/2005 WELs (United Kingdom (UK), 8/2007). Absorbed through skin. STEL: 333 mg/m ³ 15 minute(s). STEL: 250 ppm 15 minute(s). TWA: 266 mg/m ³ 8 hour(s). TWA: 200 ppm 8 hour(s).

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Product/ingredient name	Type	Exposure	Value	Population	Effects
ethanol	DNEL	Short term Inhalation	1900mg/m ³	Workers	Local
	DNEL	Long term Inhalation	950 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	343 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	950 mg/m ³	Consumers	Local
	DNEL	Long term Inhalation	114 mg/m ³	Consumers	Systemic
	DNEL	Long term Dermal	206 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Oral	87 mg/kg bw/day	Consumers	Systemic
resorcinol	DNEL	Long term Dermal	40 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	5,6 mg/m ³	Workers	Systemic
sodium hydroxide	DNEL	Long term Inhalation	1 mg/m ³	Workers	Local
	DNEL	Short term Dermal	20000 ppm	Workers	Local
	DNEL	Long term Inhalation	1 mg/m ³	Consumers	Local
formaldehyde	DNEL	Short term Inhalation	0,8 ppm	Workers	Local
	DNEL	Long term Dermal	240 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	9 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	0,037 mg/cm ²	Workers	Local
	DNEL	Long term Inhalation	0,4 ppm	Workers	Local
	DNEL	Long term Dermal	102 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	3,2 mg/cm ²	Consumers	Systemic
	DNEL	Long term Oral	4,1 mg/kg bw/day	Consumers	Systemic

SECTION 8: Exposure controls/personal protection					
Product/ingredient name	Type	Exposure	Value	Population	Effects
formaldehyde	DNEL	Long term Dermal	0,012 mg/cm ²	Consumers	Local
	DNEL	Long term Inhalation	0,1 mg/m ³	Consumers	Local
Methanol	DNEL	Short term Dermal	40 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	260 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	260 mg/m ³	Workers	Local
	DNEL	Long term Dermal	40 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	260 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	260 mg/m ³	Workers	Local
	DNEL	Short term Dermal	8 mg/kg bw/day	Consumers	Systemic
	DNEL	Short term Inhalation	50 mg/m ³	Consumers	Systemic
	DNEL	Short term Oral	8 mg/kg bw/day	Consumers	Systemic
	DNEL	Short term Inhalation	50 mg/m ³	Consumers	Local
	DNEL	Long term Dermal	8 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	50 mg/m ³	Consumers	Systemic
	DNEL	Long term Inhalation	8 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Oral	50 mg/m ³	Consumers	Local

Predicted effect concentrations

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
ethanol	PNEC	Fresh water	0,96 mg/l	-
	PNEC	Marine	0,79 mg/l	-
	PNEC	Sewage Treatment	580 mg/l	-
	PNEC	Fresh water sediment	3,6 mg/kg dwt	-
	PNEC	Marine water sediment	2,9 mg/kg dwt	-
	PNEC	Soil	0,63 mg/kg dwt	-
resorcinol	PNEC	Fresh water	0,0172 mg/l	-
	PNEC	Marine	0,00172 mg/l	-
	PNEC	Fresh water sediment	0,109 mg/kg dwt	-
	PNEC	Marine water sediment	0,0109 mg/kg dwt	-
	PNEC	Soil	10 mg/kg dwt	-
formaldehyde	PNEC	Fresh water	0,47 mg/l	Assessment Factors
	PNEC	Marine	0,47 mg/l	Assessment Factors
	PNEC	Fresh water	4,7 mg/l	Assessment Factors
	PNEC	Fresh water sediment	2,44 mg/kg dwt	Equilibrium Partitioning
	PNEC	Marine water sediment	2,44 mg/kg dwt	Equilibrium Partitioning
	PNEC	Soil	0,21 mg/kg dwt	Equilibrium Partitioning
	PNEC	Sewage Treatment Plant	0,19 mg/l	Assessment Factors

SECTION 8: Exposure controls/personal protection				
Product/ingredient name	Type	Compartment Detail	Value	Method Detail
Methanol	PNEC	Fresh water	154 mg/l	Assessment Factors
	PNEC	Marine	15,4 mg/l	Assessment Factors
	PNEC	Intermittent release.	1540 mg/l	Assessment Factors
	PNEC	sediment	570,4 mg/kg dwt	Equilibrium Partitioning
	PNEC	Soil	23,5 mg/kg wwt	Equilibrium Partitioning
	PNEC	Sewage Treatment	100 mg/l	Assessment Factors

8.2 Exposure controls

Appropriate engineering : Controls Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Use safety eyewear designed to protect against splash of liquids.

Hand protection : Wear chemical-resistant gloves (tested to EN374). Observe supplier's instructions concerning penetrability and breakthrough time.

Other skin protection : Recommended : butyl rubber , nitrile rubber
Wear suitable protective clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Recommended : Wear work clothing with long sleeves.
Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Wear appropriate respirator when ventilation is inadequate. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Recommended : Type A (Brown): organic gases and vapours with a boiling point higher than 65°C.

Environmental exposure : Emissions from ventilation or work process equipment should be checked to ensure controls they comply with the requirements of environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : Liquid.
Colour : Dark purple-red .
Odour : Alcohol-like.
Odour threshold : Not available.
pH : 7,5 to 8,5
Melting point/freezing point : Not available.

SECTION 9: Physical and chemical properties

Initial boiling point and boiling range	85 to 100°C
Flash point	Closed cup: 31°C [Pensky-Martens.]
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Burning time	Not applicable.
Burning rate	Not applicable.
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	Not applicable.
Vapour density	Not available.
Relative density	Not available.
Density (liquid)	1,12 to 1,14 g/cm ³ [25°C]
Solubility	Soluble in water
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity : Dynamic	400 to 1100 mPa·s [25 °C]
Explosive properties	Not available.
Oxidising properties	Not available.

9.2 Other information

VOC content : 24,5% (w/w)

SECTION 10: Stability and reactivity

10.1 Reactivity	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	The product is stable.
10.3 Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
10.5 Incompatible materials	Reactive or incompatible with the following materials: oxidizing materials
10.6 Hazardous decomposition products	Under normal conditions of storage and use, hazardous should not be produced. Formaldehyde may be released during processing.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ethanol	LC50 Inhalation Vapour	Rat - Male, Female	124,7 mg/l	4 hours
	LD50 Oral	Rat - Male, Female	10470 mg/kg	-
resorcinol	LD50 Dermal	Rabbit	3,36 g/kg	-
	LD50 Oral	Rat	301 mg/kg	-
	LDLo Oral	Human	29 mg/kg	-

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II - United Kingdom (UK)

Product/ingredient name	Result	Species	Dose	Exposure
formaldehyde	LC50 Inhalation Gas.	Rat - Male	490 ppm	4 hours
	LD50 Oral	Rat - Male	460 mg/kg	-
Methanol	LC50 Inhalation Vapour	Rat - Male, Female	128,2 mg/l	4 hours
	LD50 Dermal	Rabbit	17100mg/kg	-
	LD50 Oral	Rat - Male, Female	1187 to 2769 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ethanol	Skin - Primary dermal irritation index (PDII)	Rabbit	0	60 hours 0.2ml	24 hours
	Skin - Erythema/Eschar	Rabbit	0	60 hours 0.2ml	24 hours
	Skin - Oedema	Rabbit	0	60 hours 0.2ml	24 hours
	Eyes - Cornea opacity	Rabbit	1,1	1 minutes 0.1ml	21 days
	Eyes - Iris lesion	Rabbit	0,44	1 minutes	21 days
	Eyes - Redness of the conjunctivae	Rabbit	2,1	0.1ml 1 minutes	21 days
	Eyes - Oedema of the conjunctivae	Rabbit	1,3	0.1ml 1 minutes	21 days
resorcinol	Eyes - Severe irritant	Rabbit	-	-	-
	Skin - Moderate irritant	Rabbit	-	-	-
sodium hydroxide	Eyes - Oedema of the conjunctivae	Rabbit	>2,5	0.1ml (2%)	72 hours
	Eyes - Cornea opacity	Rabbit	>2	0.1ml (2%)	72 hours
formaldehyde	Skin - Irritant	Rat	-	-	7 days
	Eyes - Irritant	Rabbit	-	-	-
	Skin - Oedema	Rabbit	3	-	24 hours
	Eyes - Cornea opacity	Rat	4	-	7 days
Methanol	Skin - Oedema	Rabbit	0	-	72 hours
	Eyes - Cornea opacity	Rabbit	1	24hours	-

Conclusion/Summary : Not available.

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
resorcinol	skin	Human	Sensitising
sodium hydroxide	skin	Human	Not Sensitising
formaldehyde	skin	Mouse	Sensitising
	skin	Guinea pig	Sensitising
Methanol	Respiratory	Guinea pig	Not Sensitising
	Skin	Guinea pig	Not Sensitising

Conclusion/Summary : Not available.

SECTION 11: Toxicological information

Mutagenicity

Product/ingredient name	Test	Experiment	Result
ethanol	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria Metabolic activation: + & -	Negative
	OECD 476 In vitro Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal Metabolic activation: + &	Negative
	OECD 478 Genetic Toxicology: Rodent Dominant Lethal Test	Experiment: In vivo Subject: Mammalian-Animal Metabolic activation: + & -	Equivocal
formaldehyde	OECD 471	Experiment: In vitro Subject: Bacteria	Positive
	OECD 741	Experiment: In vitro Subject: Mammalian-Animal	Positive
	OECD 484	Experiment: In vivo Subject: Mammalian-Animal	Negative
Methanol	DNA damage and repair OECD 471	Experiment: In vitro Subject: Bacteria	Positive
	OECD 476	Experiment: In vitro Subject: Bacteria	Negative
	OECD 474	Experiment: In vivo Subject: Mammalian-Animal	Negative
	OECD 474	Experiment: In vivo Subject: Mammalian-Animal	Negative

Carcinogenicity

Conclusion/Summary :

1,3-Benzenediol: No carcinogenic effect.

Formaldehyde: Formaldehyde has local carcinogenic activity in experimental animals; there is evidence for a threshold effect for tumors involving cytotoxicity and regenerative cell proliferation as the mode of action. There is no evidence for systemic or local carcinogenic effects after oral exposure in rats. In dermal initiation/promotion studies formaldehyde did not initiate or promote skin tumorigenesis in mice. There is a clear evidence from chronic inhalation studies in rats that formaldehyde causes tumors in the nasal cavity.

Methanol: Methanol was investigated for chronic toxicity and carcinogenicity in two long-term body inhalation studies. There was no evidence of a carcinogenic potential in rats and mice exposed to air concentrations up to 1.3 mg/L.

In studies with oral administration in rats and mice the number of tumor-bearing animals in the rat study showed a clear dose-related trend. The effective dose levels were far above human occupational exposure levels and are already associated with other forms of toxicity in humans.

SECTION 11: Toxicological information

Reproductive toxicity

Conclusion/Summary : **1,3-Benzenediol:** No known significant effects or critical hazards.
Formaldehyde: It is not expected that formaldehyde reaches the reproductive organs and there is no evidence for effects on fertility and gonads in experimental animals after long-term oral or inhalation exposure. Toxicokinetic data suggest only local effects at the site of entry.
Methanol: Conclusive, but not sufficient for classification.

Teratogenicity

Conclusion/Summary : **1,3-Benzenediol:** No known significant effects or critical hazards.
Formaldehyde: There is no evidence for adverse effects of formaldehyde on embryo and fetal development as dose levels inducing local maternal effects and secondary decrease in body weights and growth.
Methanol: Conclusive, but not sufficient for classification.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Inhalation : Vapour may be irritating to eyes and respiratory system.
Ingestion : Harmful if swallowed. Irritating to mouth, throat and stomach.
Skin contact : Irritating to skin. May cause sensitisation by skin contact.
Eye contact : Irritating to eyes.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : No specific data.
Ingestion : No specific data.
Skin contact : Adverse symptoms may include the following:
irritation
redness
Eye contact : Adverse symptoms may include the following:
irritation
watering
redness

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects: Not available.

Potential delayed effects : Not available.

SECTION 11: Toxicological information

Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure
ethanol	Sub-chronic NOAEL Oral	Rat - Male, Female	1,28 mg/kg	14 weeks; 7 days per week
	Sub-chronic LOAEL Oral	Rat - Male, Female	3,16 mg/kg	14 weeks; 7 days per week
formaldehyde	Chronic LOAEL Oral	Rat - Male, Female	82 mg/kg	105 weeks
	Chronic NOAEC Inhalation Gas.	Rat - Male, Female	1 ppm	26 weeks
	Sub-acute NOAEC Inhalation Gas.	Rat - Male	2 ppm	6 weeks
	Sub-acute LOAEC Inhalation Gas.	Rat - Male	6 ppm	6 weeks
Methanol	Chronic NOAEL Oral	Rat - Male, Female	466 to 529 mg/kg Repeated dose	104 weeks
	Chronic NOEC Inhalation Vapour	Rat - Male, Female	0,13 mg/l	12 months
	Chronic NOAEC Inhalation Vapour	Rat - Male Female	1,3 mg/l Continuous	108 days
	Chronic NOAEC Inhalation Vapour	Rat	1,33 mg/l Continuous	17 days; 22,7 hours per day

Conclusion/Summary : Not available.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
ethanol	EC50 675 mg/l Fresh water	Algae - Chlorella vulgaris	4 days Static
	EC50 4432 mg/l Fresh water	Aquatic plants - Lemna gibba	7 days Static
	Acute LC50 5012 mg/l Fresh water	Daphnia - Ceriodaphnia dubia	48 hours Static
	Acute LC50 14200 mg/l Fresh water	Fish - Pimephales promelas	96 hours Flow Through
	Acute LC50 15300 mg/l Fresh water	Fish - Pimephales promelas	96 hours Flow through

SECTION 12: Ecological information			
Product/ingredient name	Result	Species	Exposure
ethanol	Chronic LC50 1806 mg/l Fresh water	Daphnia - Ceriodaphnia dubia	10 days Semi-static
	Chronic LC50 454 mg/l Fresh water	Daphnia - Daphnia magna	9 days Semi-static
	Chronic NOEC 9,6 mg/l Fresh water	Daphnia - Daphnia magna	9 days Semi-static
resorcinol	Acute EC0 60 mg/l Fresh water	Algae - Scenedesmus	-
	Acute EC0 0,8 mg/l	Daphnia	-
	Acute EC0 <1000 mg/l	Micro-organism - E-Coli	-
	Acute LC50 42 mg/l	Crustaceans - Grass Shrimp	96 hours
	Acute LC50 53 mg/l Fresh water	Fish - Pimephales Promelas	96 hours
sodium hydroxide	Acute EC50 40,4 mg/l	Daphnia - Ceriodaphnia sp.	48 hours
formaldehyde	EC50 4,89 mg/l Fresh water	Algae - Scenedesmus subspicatus	72 hours
	Acute EC50 5,8 mg/l Fresh water	Daphnia - Daphnia pulex	48 hours
	Acute LC50 6,7 mg/l Fresh water	Fish - Morone saxatili	96 hours
Methanol	EC50 22000 mg/l Fresh water	Algae - Selenastrum	96 hours
	IC50 8800 mg/l Fresh water	Capricornutum	Static
	Acute EC50 >10000 mg/l Fresh water	Micro-organism - Nitrosomonas sp.	24 hours Static
	Acute LC50 15400 mg/l Fresh water	Daphnia - Daphnia magna	48 hours Static
	Chronic NOEC 7900 mg/l Fresh water	Fish - Lepomis macrochirus	96 hours Flow Through 200 hours Static

Conclusion/Summary : **Formaldehyde:** Toxic to aquatic organisms.
Methanol: No known significant effects or critical hazards.

SECTION 12: Ecological information

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
resorcinol	-	89 % - 2 days	446 mg/l	-
formaldehyde	Anaerobic biodegradation OECD 303 A	100 % - 4 days 99,5 % - 160 days	Degradation Degradation	Anaerobic sludge Activated sludge Industrial
	OECD 301 C OECD 301 D	97 % - Readily - 14 days 90 % - Readily - 28 days	TOC removal 30 mg/l O2 Consumption	Adapted - -
	Methanol	- - - - -	83 to 91 % - Readily - 3 days 71 to 83 % - Readily - 5 days 69 to 97 % - 5 days 53,4 % - 5 days 46,3 % - 5 days	- BOD/ThOD O2 Consumption - -

Conclusion/Summary : **Formaldehyde:** Readily biodegradable
Methanol: Readily biodegradable

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II - United Kingdom (UK)

Methanol: Readily biodegradable

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
resorcinol	-	-	Readily
formaldehyde	-	-	Readily
Methanol	-	50%; 17.2 day(s)	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
resorcinol	-	3.16	Low
formaldehyde	0,35	0,396	Low
Methanol	-0.77	<10	Low

12.4 Mobility in soil

Soil/water partition coefficient (KOC) : Not available.

Mobility : Not available

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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.

Hazardous waste : Yes.

European waste catalogue (EWC)

Waste code	Waste designation
08 04 09*	waste adhesives and sealants containing organic solvents or other dangerous substances

SECTION 13: Disposal considerations





Packaging

Methods of disposal : Waste packaging should be recycled.

Type of packaging	European waste catalogue (EWC)
Intermediate Bulk Container (IBC)	15 01 02 plastic packaging 15 01 04 metallic packaging 15 01 03 wooden packaging 15 01 10* packaging containing residues of or contaminated by dangerous substances
Steel drum	15 01 04 metallic packaging 15 01 10* packaging containing residues of or contaminated by dangerous substances
Can	15 01 02 plastic packaging 15 01 10* packaging containing residues of or contaminated by dangerous substances
Pallet	15 01 03 wooden packaging

Special precautions : This material and its container must be disposed of in a safe way. 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. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN/ADNR	IMDG	IATA
14.1 UN number	UN1866	UN1866	UN1866	UN1866
14.2 UN proper shipping name	RESIN SOLUTION	RESIN SOLUTION	RESIN SOLUTION	RESIN SOLUTION
14.3 Transport hazard class(es)	3 	3 	3 	3 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	No	Yes	No	No
14.6 Special precautions for user	Not available.	Not available.	Not available.	Not available.
Additional information	Hazard identification Number 30 Limited quantity LQ7 Special provisions 640E Tunnel code (D/E)	-	Emergency schedules (EmS) F-E, _S-E_	Passenger and Cargo Aircraft Quantity limitation: 60 L Packaging instructions: 309 Cargo Aircraft Only Quantity limitation: 220 L Packaging instructions: 310 Limited Quantities Passenger Aircraft Quantity limitation: 10 L Packaging instructions: Y309

SECTION 14: Transport information

14.7 Transport in bulk : Not available.
according to Annex II of
MARPOL 73/78 and the IBC
Code

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions : Not applicable.
**on the manufacture,
placing on the market and
use of certain dangerous
substances, mixtures and
articles**

Other EU regulations

Europe inventory :

All components are listed or exempted.

Black List Chemicals :

Not listed

Priority List Chemicals :

Listed

**Integrated pollution :
prevention and control list
(IPPC) - Air**

Not listed

**Integrated pollution :
prevention and control list
(IPPC) – Water**

Not listed

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
formaldehyde	Carc. Cat. 3; R40	-	-	-

National regulations

**15.2 Chemical Safety :
Assessments**

This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

**Abbreviations and :
Acronyms**

ATE = Acute Toxicity Estimate

**CLP = Classification, Labelling and Packaging
Regulation [Regulation (EC) No. 1272/2008]**

DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement

PNEC = Predicted No Effect Concentration

RRN = REACH Registration Number

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226

Skin Irrit. 2, H315

Eye Dam. 1, H318

Skin Sens. 1, H317

STOT SE 2, H371o

SECTION 16: Other information

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008

[CLP/GHS]

Classification	Justification
Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 2, H371o	On basis of test data Calculation method Calculation method Calculation method Calculation method

Full text of abbreviated H: Statements

H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H290 May be corrosive to metals. H301 Toxic if swallowed.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335i May cause respiratory irritation.
H351 Suspected of causing cancer.
H370 Causes damage to organs.
H370o Causes damage to organs if swallowed.

Full text of classifications [CLP/GHS]

H371o May cause damage to organs if swallowed.
Acute Tox. 3, H301 ACUTE TOXICITY: ORAL - Category 3
Acute Tox. 3, H311 ACUTE TOXICITY: SKIN - Category 3
Acute Tox. 3, H331 ACUTE TOXICITY: INHALATION - Category 3
Acute Tox. 4, H302 ACUTE TOXICITY: ORAL - Category 4
Aquatic Acute 1, H400 AQUATIC TOXICITY (ACUTE) - Category 1
Carc. 2, H351 CARCINOGENICITY - Category 2
Eye Dam. 1, H318 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Flam. Liq. 2, H225 FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3, H226 FLAMMABLE LIQUIDS - Category 3
Met. Corr. 1, H290 CORROSIVE TO METALS - Category 1
Skin Corr. 1A, H314 SKIN CORROSION/IRRITATION - Category 1A
Skin Corr. 1B, H314 SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1, H317 SKIN SENSITIZATION - Category 1
STOT SE 1, H370 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [central nervous system (CNS) and optic nerve] - Category 1
STOT SE 1, H370o SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE): ORAL [blood system and central nervous system (CNS)] - Category 1
STOT SE 2, H371o SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE): ORAL [blood system and central nervous system (CNS)] - Category 2
STOT SE 3, H335i SPECIFIC TARGET ORGAN TOXICITY (SINGLE

SECTION 16: Other information

Full text of abbreviated R Phrases

EXPOSURE): INHALATION [Respiratory tract irritation]

R11- Highly flammable.
R10- Flammable.
R40- Limited evidence of a carcinogenic effect.
R23/24/25- Toxic by inhalation, in contact with skin and if swallowed.
R39/23/24/25- Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
R22- Harmful if swallowed.
R34- Causes burns.
R35- Causes severe burns.
R36/38- Irritating to eyes and skin.
R43- May cause sensitisation by skin contact.
R50- Very toxic to aquatic organisms.

Full text of classifications [DSD/DPD]

F - Highly flammable
Carc. Cat. 3 - Carcinogen category 3
T - Toxic
C - Corrosive
Xn - Harmful
Xi - Irritant
N - Dangerous for the environment

Date of issue/ Date of revision : 12.11.2012
Date of previous issue : No previous validation.
Previous product name : Not available
Version : 1

Notice to reader

To the best of our knowledge, the information contained herein is accurate. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.