

SAFETY DATA SHEET**aliancys****Neogel® 8373-W-xxxxH****Section 1. Chemical product and company identification**

GHS product identifier :
GHS product identifier :
HazChem Catalogue chemical name : Unsaturated polyester resin
Chemical formula : Not applicable.
Other means of identification : Not available.
Product type : Liquid.
Recommended use : Resins system used in the production of fibre reinforced plastics or non-reinforced filled products.
Supplier : Jinling Aliancys Resins Co., Ltd. Tel: +86 25 85493888
 Zone F, 3/F, Block A www.aliancys.com
 Fenghuo Building
 No. 88 Yun Long Shan Road
 Jian Ye District
 Nanjing, Jiangsu Province
 210019 P.R. China
e-mail address of person responsible for this SDS : product.safety@aliancys.com (Communication in English only please)
Emergency telephone number : 0086-532-83889090

Section 2. Hazards identification**Emergency overview**

Liquid.
White.
typical

Toxic Risk of serious damage to eyes. Suspected of causing cancer. Reprotoxic category 2. Irritating. Toxic to the environment. Fire/explosion hazards

Under normal conditions of storage and use, hazardous reactions will not occur.

Gas/vapour is heavier than air and may travel along the floor to a source of ignition and flash back.

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
 ACUTE TOXICITY (inhalation) - Category 4
 SKIN CORROSION/IRRITATION - Category 2
 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
 CARCINOGENICITY - Category 2
 TOXIC TO REPRODUCTION (Fertility) - Category 2
 TOXIC TO REPRODUCTION (Unborn child) - Category 2
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
 ACUTE AQUATIC HAZARD - Category 2
 LONG-TERM AQUATIC HAZARD - Category 3

GHS label elements

Signal word : Danger

Hazard statements : H226 - Flammable liquid and vapour.
 H332 - Harmful if inhaled.
 H319 - Causes serious eye irritation.
 H315 - Causes skin irritation.
 H361 - Suspected of damaging fertility or the unborn child.
 H351 - Suspected of causing cancer.
 H335 - May cause respiratory irritation.
 H372 - Causes damage to organs through prolonged or repeated exposure.
 H401 - Toxic to aquatic life.
 H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements - Code

Prevention : P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 P280 - Wear protective gloves: > 8 hours (breakthrough time): fluor rubber (Viton) (0.70 mm); < 1 hour (breakthrough time): Chloroprene, nitrile rubber (0.2 mm) . Wear eye or face protection. Wear protective clothing.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.
 P242 - Use only non-sparking tools.
 P243 - Take precautionary measures against static discharge.
 P233 - Keep container tightly closed.
 P271 - Use only outdoors or in a well-ventilated area.
 P273 - Avoid release to the environment.
 P260 - Do not breathe vapour.
 P270 - Do not eat, drink or smoke when using this product.
 P264 - Wash hands thoroughly after handling.

Response : P314 - Get medical attention if you feel unwell.
 P308 + P313 - IF exposed or concerned: Get medical attention.
 P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
 P302 + P352 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.
 P332 + P313 - If skin irritation occurs: Get medical attention.
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313 - If eye irritation persists: Get medical attention.

Storage : P405 - Store locked up.
 P403 - Store in a well-ventilated place.
 P235 - Keep cool.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Physical/chemical hazards : Flammable. Gas/vapour is heavier than air and may travel along the floor to a source of ignition and flash back.

Human health hazards : Harmful by inhalation. Irritating to eyes and skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of harm to the unborn child.

Environmental hazards :
 Toxic to aquatic life.

Other hazards which do not result in classification : Gas/vapour is heavier than air and may travel along the floor to a source of ignition and flash back.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture
Other means of identification : Not available.
CAS number/other identifiers
CAS number : Not applicable.
EC number : Mixture.
Product code : 020925WW46379

Ingredient name	%	CAS number
styrene [stable]	25 - 50	100-42-5
Titanium dioxide	5 - 10	13463-67-7
Talc	5 - 10	14807-96-6

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 and hence require reporting in this section.

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

Section 4. First aid measures

Description of necessary 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** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eyes** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Skin** : Adverse symptoms may include the following:
irritation
redness
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Specific hazards arising from the chemical** : Flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapour/gas is heavier than air and will spread along the ground. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard. This material is toxic to aquatic life. 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. Gas/vapour is heavier than air and may travel along the floor to a source of ignition and flash back.
- Hazardous thermal decomposition products** : In case of fire, may produce hazardous decomposition products such as carbon monoxide, carbon dioxide, (dense) black smoke, aldehydes, organic acids.
- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if 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.

Section 6. Accidental release measures

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. Shut off all ignition sources. No flares, smoking or flames in hazard area. 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 the information in "For non-emergency personnel".
- 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.

Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. 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.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Put on appropriate personal protective equipment (see Section 8). 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. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Conditions for safe storage, including any incompatibilities** : Do not store above the following temperature: 30°C (86°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. Ventilation required along the floor. Store in original container, protected from direct sunlight.
Keep away from heat and direct sunlight.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
styrene [stable]	GBZ 2.1 (China, 4/2007). Absorbed through skin. PC-TWA: 50 mg/m ³ 8 hours. PC-STEL: 100 mg/m ³ 15 minutes.
Titanium dioxide	GBZ 2.1 (China, 4/2007). PC-TWA: 8 mg/m ³ 8 hours. Form: Dust
Talc	GBZ 2.1 (China, 4/2007). PC-TWA: 1 mg/m ³ 8 hours. Form: Respirable dust PC-TWA: 3 mg/m ³ 8 hours. Form: Total dust

- 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.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety glasses with side shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. > 8 hours (breakthrough time): fluor rubber (Viton) (0.70 mm)
< 1 hour (breakthrough time): Chloroprene, nitrile rubber (0.2 mm)

Skin protection : Chemical-resistant protective suit.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Colour : White.

Odour : typical

Odour threshold : 0.15 to 25 ppm

pH : Not available.

Melting point : Not available.

Boiling point : 145 °C

Softening range : Not available.

Flash point : 33 °C Closed cup

Evaporation rate : 12.4 (compared with butyl acetate)

Flammability (solid, gas) : Combustible when exposed to heat or flame.

Lower and upper explosive (flammable) limits : Lower: 1.1%
Upper: 6.1%

Vapour pressure : 0.85 kPa

Vapour density : 3.6 (Air = 1)

Relative density : 1.15 (Water = 1)

Density (g/cm³) : 1.15 g/cm³ (23°C)

Bulk density : Not available.

Solubility : Insoluble in the following materials: cold water and hot water.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : 490 °C

Decomposition temperature : Not available.

Conductivity : Not available.

Molecular weight : Not applicable.

Instability temperature : Not available.

Minimum ignition temperature : Not available.

Minimum ignition energy : Not available.

VOC content : Not available.

Dust explosion class :

Critical pressure : Not available.

Critical temperature : Not available.

Viscosity : Dynamic (room temperature): 6000 to 10000 mPa·s (6000 to 10000 cP)
 Kinematic (room temperature): >52.17 cm²/s (>5217 cSt)
 Kinematic (40°C (104°F)): >0.205 cm²/s (>20.5 cSt)

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.
Chemical stability : The product is stable.
Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
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. Do not allow vapour to accumulate in low or confined areas.
Incompatible materials : Reactive or incompatible with the following materials:
 oxidizing materials
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
styrene [stable]	LC50 Inhalation Vapour	Rat	10 to 20 mg/l	4 hours
	LD50 Oral	Rat	>5000 mg/kg	-
	LDLo Dermal	Rat - Male, Female	>2000 mg/kg	-
Titanium dioxide	LC50 Inhalation Dusts and mists	Rat - Male	>6.82 mg/l	4 hours
	LD50 Oral	Rat - Female	>5000 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Talc	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
Titanium dioxide	skin	Mouse	Not sensitizing
	skin	Guinea pig	Not sensitizing

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Titanium dioxide	-	Experiment: In vitro Subject: Mammalian-Animal	Positive
	-	Experiment: In vitro Subject: Mammalian-Human	Positive
	-	Experiment: In vitro Subject: Bacteria	Negative
	-	Experiment: In vivo Subject: Mammalian-Animal	Negative

Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Titanium dioxide	Negative - Inhalation - NOAEC	Rat	-	-
	Negative - Oral - NOEL	Rat	-	-
	Negative - Oral - NOEL	Mouse	-	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
styrene [stable]	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
styrene [stable]	Category 1	Not determined	Not determined

Aspiration hazard

Name	Result
styrene [stable]	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.
Inhalation : Harmful if inhaled. May cause respiratory irritation.
Skin contact : Causes skin irritation.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness

Inhalation : Adverse symptoms may include the following:
 respiratory tract irritation
 coughing
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations

Skin contact : Adverse symptoms may include the following:
 irritation
 redness
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations

Ingestion : Adverse symptoms may include the following:
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations

Delayed and immediate effects as well as 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.

Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure
styrene [stable]	Chronic NOAEL Oral	Rat - Male, Female	1000 mg/kg	-
	Chronic LOAEL Oral	Rat - Male, Female	2000 mg/kg	-
	Chronic NOAEC Inhalation Vapour	Rat - Male, Female	0.21 mg/l	104 weeks
	Sub-acute LOAEC Inhalation Vapour	Rat - Male	500 ppm	6 hours
	Sub-acute NOAEC Inhalation Vapour	Rat - Male	150 ppm	6 hours
Titanium dioxide	Sub-chronic NOEL Oral	Rat	24000 mg/kg	-
	Chronic NOAEC Inhalation Dusts and mists	Rat	5 mg/m ³	24 months; 6 hours per day 5 days per week
	Sub-chronic NOAEC Inhalation Dusts and mists	Rat	0.52 mg/m ³	13 weeks; 6 hours per day 5 days per week
	Sub-acute NOAEC Inhalation Dusts and mists	Rat	5 mg/m ³	4 weeks; 6 hours per day 5 days per week

- General** : Causes damage to organs through prolonged or repeated exposure.
- Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : Suspected of damaging the unborn child.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	8555.7 mg/kg
Inhalation (gases)	15400.2 ppm
Inhalation (vapours)	37.64 mg/l
Inhalation (dusts and mists)	5.133 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
styrene [stable]	Acute EC50 4.9 mg/l Fresh water	Algae	72 hours
	Acute EC50 4.7 mg/l Fresh water	Daphnia	48 hours
	Acute LC50 10 mg/l Fresh water	Fish	96 hours
Titanium dioxide	Chronic NOEC 1.01 mg/l Fresh water	Daphnia	21 days
	Acute EC50 5.83 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute LC50 3 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 6.5 mg/l Fresh water	Daphnia - Daphnia pulex - Neonate	48 hours
	Acute LC50 1000 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute NOEC ≥1 mg/l	Fish	14 days
Chronic NOEC 0.984 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours	

Persistence/degradability

Not available.

Product/ingredient name	Test	Result	Dose	Inoculum
styrene [stable]	-	73.2 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
styrene [stable]	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
styrene [stable]	3	13,49	low
Titanium dioxide	-	352	low

Mobility in soil




Soil/water partition coefficient (K_{oc}) : Not available.

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

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised 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 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. 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. Vapour 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	UN	IMDG	IATA
UN number	UN1866	UN1866	UN1866
UN proper shipping name	RESIN SOLUTION	RESIN SOLUTION	Resin solution
Transport hazard class(es)	3 	3 	3 
Packing group	III	III	III
Environmental hazards	No.	No.	No.
Additional information	<p>Special provisions 223</p> <p>Viscous substance exemption This class 3 material is not subject to regulation in packagings up to 450 L. Exempted according to 2.3.2.5 (Viscous substance exemption)</p>	<p>Emergency schedules (EmS) F-E, _S-E_</p> <p>Special provisions 223, 955</p> <p>Viscous substance exemption This class 3 material is not subject to regulation in packagings up to 30 L. Exempted according to 2.3.2.5 (Viscous substance exemption)</p>	<p>Passenger and Cargo Aircraft Quantity limitation: 60 L Packaging instructions: 355</p> <p>Cargo Aircraft OnlyQuantity limitation: 220 L Packaging instructions: 366</p> <p>Limited Quantities - Passenger AircraftQuantity limitation: 10 L Packaging instructions: Y344</p> <p>Special provisions A3</p>

Special precautions for user **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of Marpol and the IBC Code

Not available.

Section 15. Regulatory information

China inventory (IECSC) : Not determined.

List of Goods banned for Importing

None of the components are listed.

Inventory of Hazardous Chemicals

Ingredient name	CAS number	Status	Reference number
Neogel® 8373-W-1H	-	Listed	2828
Styrene monomer	100-42-5	Listed	96
Xylene isomers mixture	1330-20-7	Listed	358

List of Goods banned for Exporting

None of the components are listed.

List of Toxic Chemicals Severely Restricted for Importing & Exporting by China

None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Ingredient name	List name	Status
Not listed.		

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Ingredient name	List name	Status
Not listed.		

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Ingredient name	List name	Status
Not listed.		

Section 16. Other information

History

Date of printing : 7/6/2016

Date of issue/Date of revision : 7/6/2016

Date of previous issue : 7/6/2016

Version : 5

Key to abbreviations

: ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 UN = United Nations

Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 3	On basis of test data
ACUTE TOXICITY (inhalation) - Category 4	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
CARCINOGENICITY - Category 2	Calculation method
TOXIC TO REPRODUCTION (Fertility) - Category 2	Calculation method
TOXIC TO REPRODUCTION (Unborn child) - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1	Calculation method
ACUTE AQUATIC HAZARD - Category 2	Calculation method
LONG-TERM AQUATIC HAZARD - Category 3	Calculation method

References : Not available.

 **Indicates information that has changed from previously issued version.**

Responsible name : MSDS:
DSM Resins - Regulatory Affairs Department
P.O. Box 615, 8000 AP Zwolle
The Netherlands

Notice to reader

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The user is responsible for ensuring that appropriate precautions are taken and for satisfying themselves that the data are suitable and sufficient for the product's intended purpose. In case of any unclarity we advise consulting the supplier or an expert.