SAFETY DATA SHEET

1. Id entificatio HeatShield

Product identifier

Other means of id entification

Product Code

Recommended us e Not availabl .

Manu facturer/Imp rter/Supplier Distributor information

Manu facturer

C mpany name HYDROSEAL CHANGSHA LLC.
NO.98 LiXiang Road,ChangSha Development,Hunan

Te lephone 0731-84067532

E mergency phone number CHEMTREC [DAY OR NIG HT] 1-800-424-9300
Within USA and CANADA 1-800-42 4-9300
Outside USA and Canada: 1 703-741-5970
Collect C alls Accepted

2. Hazard(s) id entification

Physical hazards	Not classified.	
Health hazards	Sensitization , skin	Categor y 1
	Carcinogeni city	Categor y 2
	Reproductiv e toxicity	Categor y 1
Envir onmental haz ards	Hazardous to the aquatic e nvironment, ac ute hazard	Categor y 2
	Hazardous to the aquatic e nvironment, long-term hazard	Categor y 2
OSH A defined hazards	Not classified.	

Label elements

ignal word azard None.

statement May damag e fertility or the unborn child. Toxic to aquati c life.

recautionary statement

Preventio n Contaminate d work clothing must not be allowed out of the workplace. Wear protecti ve gloves/protective clothing/e ye protection/face protection.

Response If on skin: Wash with plent of water. If ex posed or concerned: Get me dical

Storage advice/attention. Not availabl .

Disposal Not availabl .

Hazard(s) not otherwise class ified (HNOC) None known.

3. Composition /informatio n on ingre dients

Mixtu res

C emical name	Common name and synony ms	CAS number	%
C lcium Carbon te		1317-65-3	30 to <40

Chemical name	Common name and synonyms	CAS number	%
Titanium Dioxide		13463-67-7	5 to <10
Zinc Oxide		1314-13-2	1 to <5
2-N-Octyl-4-Isothiazolin-3-one		26530-20-1	0.1 to <1
Ammonium Hydroxide 20-30%		1336-21-6	0.1 to <1
PARAFFINIC PETROLEUM OIL		64742-54-7	0.1 to <1
Pure (Dibutyl Phthalate)		84-74-2	0.1 to <1
Non Hazardous Ingredients			50 to <60

4. First-aid measures

Inhalation
If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

Skin contact
Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

Eye contact
Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Rinse with water. Get medical attention if irritation develops and persists.

Ingestion
Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed
Upper respiratory tract irritation. Irritation of eyes and mucous membranes. Coughing. Skin irritation. May cause an allergic skin reaction. Dermatitis. Rash.

Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information
IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions
In case of fire and/or explosion do not breathe fumes. Do not scatter the material.

Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards
No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up
Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Ammonium Hydroxide 20-30% (CAS 1336-21-6)	PEL	35 mg/m3	
		50 ppm	
Calcium Carbonate (CAS 1317-65-3)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Pure (Dibutyl Phthalate) (CAS 84-74-2)	PEL	5 mg/m3	
Titanium Dioxide (CAS 13463-67-7)	PEL	15 mg/m3	Total dust.
Zinc Oxide (CAS 1314-13-2)	PEL	5 mg/m3	Respirable fraction.
		5 mg/m3	Fume.
		15 mg/m3	Total dust.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Ammonium Hydroxide 20-30% (CAS 1336-21-6)	STEL	35 ppm	
	TWA	25 ppm	
PARAFFINIC PETROLEUM OIL (CAS 64742-54-7)	TWA	5 mg/m3	Inhalable fraction.
Pure (Dibutyl Phthalate) (CAS 84-74-2)	TWA	5 mg/m3	
Titanium Dioxide (CAS 13463-67-7)	TWA	10 mg/m3	
Zinc Oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable fraction.
	TWA	2 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Ammonium Hydroxide 20-30% (CAS 1336-21-6)	STEL	27 mg/m3	
		35 ppm	
	TWA	18 mg/m3	
		25 ppm	
Calcium Carbonate (CAS 1317-65-3)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Pure (Dibutyl Phthalate) (CAS 84-74-2)	TWA	5 mg/m3	
Zinc Oxide (CAS 1314-13-2)	Ceiling	15 mg/m3	Dust.
	STEL	10 mg/m3	Fume.
	TWA	5 mg/m3	Fume.

US. NIOSH: Pocket Guide to Chemical Hazards			
Components	**Type**	**Value**	**Form**
		5 mg/m3	Dust.

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection If contact is likely, safety glasses with side shields are recommended.

Skin protection Hand protection Wear appropriate chemical resistant gloves.

Other Respiratory protection Wear appropriate chemical resistant clothing.

Thermal hazards In case of insufficient ventilation, wear suitable respiratory equipment.

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Color Not available.

Odor Not available.

Odor threshold Not available.

pH Not available.

Melting point/freezing point 3349.4 °F (1843 °C) estimated

Initial boiling point and boiling range 4532 °F (2500 °C) estimated

Flash point 999.0 °F (537.2 °C) estimated

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 617.64 hPa estimated

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Density 12.02 lbs/gal

Flammability class	Combustible IIIB estimated
Percent volatile	32.45 % estimated
Specific gravity	1.44
VOC	0.068956 lbs/gal Material estimated 0.129727 lbs/gal Regulatory estimated 8.262997 g/l Material estimated 15.545186 g/l Regulatory estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Fluorine.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	May cause an allergic skin reaction.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of eyes and mucous membranes. Upper respiratory tract irritation. Coughing. Skin irritation. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity May cause an allergic skin reaction.

Components	Species	Test Results
Ammonium Hydroxide 20-30% (CAS 1336-21-6)		
Acute		
Oral		
LD50	Rat	350 mg/kg
Pure (Dibutyl Phthalate) (CAS 84-74-2)		
Acute		
Dermal		
LD50	Rabbit	4200 mg/kg
		20 ml/kg
Inhalation		
LC50	Mouse	25 mg/l, 2 Hours
	Rat	15.68 mg/l, 4 Hours
Oral		
LD50	Guinea pig	10000 mg/kg
	Mouse	4840 mg/kg
	Rat	6300 mg/kg
Zinc Oxide (CAS 1314-13-2)		
Acute		
Inhalation		
LC50	Mouse	> 5.7 mg/l, 4 Hours
Oral		
LD50	Mouse	7950 mg/kg

Components	Species	Test Results
	Rat	> 5 g/kg

* Estimates for product may be based on additional component data not shown.

Prolonged skin contact may cause temporary irritation.

Direct contact with eyes may cause temporary irritation.

Not available.

May cause an allergic skin reaction.

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Titanium Dioxide (CAS 13463-67-7) 2B Possibly carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

PARAFFINIC PETROLEUM OIL (CAS 64742-54-7) Known To Be Human Carcinogen.

May damage fertility or the unborn child.

Not classified.

Not classified.

Not available.

Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Ammonium Hydroxide 20-30% (CAS 1336-21-6)			
Aquatic			
Fish	LC50	Western mosquitofish (Gambusia affinis)	15 mg/l, 96 hours
Pure (Dibutyl Phthalate) (CAS 84-74-2)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	2.99 mg/l, 48 hours
Fish	LC50	Channel catfish (Ictalurus punctatus)	0.4 - 0.53 mg/l, 96 hours
Titanium Dioxide (CAS 13463-67-7)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	> 1000 mg/l, 48 hours
Fish	LC50	Mummichog (Fundulus heteroclitus)	> 1000 mg/l, 96 hours
Zinc Oxide (CAS 1314-13-2)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	2246 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Pure (Dibutyl Phthalate) 4.9

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

TSCA Chemical Action Plans, Chemicals of Concern

Pure (Dibutyl Phthalate) (CAS 84-74-2)	Phthalates Action Plan

CERCLA Hazardous Substance List (40 CFR 302.4)

Ammonium Hydroxide 20-30% (CAS 1336-21-6)	Listed.
Pure (Dibutyl Phthalate) (CAS 84-74-2)	Listed.
Zinc Oxide (CAS 1314-13-2)	Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Zinc Oxide	1314-13-2	1 to <5
Ammonium Hydroxide 20-30%	1336-21-6	0.1 to <1
Pure (Dibutyl Phthalate)	84-74-2	0.1 to <1

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Pure (Dibutyl Phthalate) (CAS 84-74-2)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

PARAFFINIC PETROLEUM OIL (CAS 64742-54-7)
Pure (Dibutyl Phthalate) (CAS 84-74-2)
Titanium Dioxide (CAS 13463-67-7)

US. Massachusetts RTK - Substance List

Ammonium Hydroxide 20-30% (CAS 1336-21-6)
Calcium Carbonate (CAS 1317-65-3)
Pure (Dibutyl Phthalate) (CAS 84-74-2)
Titanium Dioxide (CAS 13463-67-7)
Zinc Oxide (CAS 1314-13-2)

US. New Jersey Worker and Community Right-to-Know Act

Ammonium Hydroxide 20-30% (CAS 1336-21-6)
Calcium Carbonate (CAS 1317-65-3)
Pure (Dibutyl Phthalate) (CAS 84-74-2)
Titanium Dioxide (CAS 13463-67-7)
Zinc Oxide (CAS 1314-13-2)

US. Pennsylvania Worker and Community Right-to-Know Law

Ammonium Hydroxide 20-30% (CAS 1336-21-6)
Calcium Carbonate (CAS 1317-65-3)
Pure (Dibutyl Phthalate) (CAS 84-74-2)
Titanium Dioxide (CAS 13463-67-7)
Zinc Oxide (CAS 1314-13-2)

US. Rhode Island RTK

Ammonium Hydroxide 20-30% (CAS 1336-21-6)
Pure (Dibutyl Phthalate) (CAS 84-74-2)
Zinc Oxide (CAS 1314-13-2)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

DIPHENYL KETONE (CAS 119-61-9)	Listed: June 22, 2012
Titanium Dioxide (CAS 13463-67-7)	Listed: September 2, 2011

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Pure (Dibutyl Phthalate) (CAS 84-74-2)	Listed: December 2, 2005

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

Pure (Dibutyl Phthalate) (CAS 84-74-2)	Listed: December 2, 2005

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

Pure (Dibutyl Phthalate) (CAS 84-74-2)	Listed: December 2, 2005

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	09-08-2014
Revision date	11-06-2015
Version #	07

HMIS® ratings	Health: 2* Flammability: 0 Physical hazard: 0
NFPA ratings	Health: 2 Flammability: 0 Instability: 0
Disclaimer	This information relates to the specific material designated and may not be valid for such material used on combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, **no representation, warranty or guarantee**, expressed or implied, **is made** as to its accuracy, reliability, or completeness. GAF cannot anticipate all conditions under which this information and product, or the products of other manufacturers in combination with this product, may be used. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his particular use. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release. **We do not accept liability** for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license of valid patents.
Revision Information	Conversion to GAF SDS