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

1.1 Product identifier

Trade name: Benzyl alcohol
REACH registration No.: 01-2119492630-38-0004

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

General use: Solvent, laboratory chemical, flavouring agents or odorants, intermediate, flux, photo-chemicals

Identified uses:

Industrial use:
1. Industrial manufacturing
2. Chemical formulation and packaging
3. Building material/distributor
4. Adhesives/sealants
5. Coatings and paints, fillers, putties, thinners
6. Non-metal-surface treatment products
7. Ink and toners
8. Lubricants, greases, release products
9. Industrial use of intermediates
10. Paper and board dye, finishing and impregnating products
11. Photo-chemicals
12. Polymer preparations and compounds
13. Washing and cleaning products (including solvent based products)
14. Cosmetics, personal care products
15. Metal surface treatment

Professional use:
1. Building material/distributor
2. Adhesives/sealants
3. Coatings and paints, fillers, putties, thinners
4. Metal surface treatment
5. Non-metal-surface treatment products
6. Ink and toners
7. Laboratory chemical
8. Paper and board dye, finishing and impregnating products
9. Photo-chemicals
10. Polishes and wax blends
11. Polymer preparations and compounds
12. Washing and cleaning products (including solvent based products)
13. Cosmetics, personal care products

Consumer use:
Washing and cleaning products (including solvent based products)

Uses advised against: none

1.3 Details of the supplier of the safety data sheet

Company name: Hubei Greenhome Materials Technology, Inc.
Street/POB-No.: 12/F,Xinglong building, 1007 Jiefang Ave., Wuhan, Hubei, China
Postal Code, city: 430030, Wuhan
Telephone: +86-27-81880582
Telefax: +86-27-81880584
Dept. responsible for information:
REACH Department,
Telephone: +86 (0)27-81880558, E-mail: greenhome@greenhomechem.com

1.4 Emergency telephone number

GIZ-Nord, Germany, Telephone: +49 (0)551-19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

Acute Tox. 4; H302 Harmful if swallowed.

Acute Tox. 4; H332 Harmful if inhaled.

Eye Irrit. 2; H319 Causes serious eye irritation.

Classification according to directive 67/548/EEC

Xn; R20/22 Harmful by inhalation and if swallowed.
Xi; R36 Irritating to eyes.

2.2 Label elements

Labelling (CLP)

Signal word: **Warning**

Hazard statements:	H302	Harmful if swallowed.
	H319	Causes serious eye irritation.
	H332	Harmful if inhaled.
Safety precautions:	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P337+P313	If eye irritation persists: Get medical advice/attention.
	P501	Dispose of contents/container to hazardous or special waste collection point.

Labelling (67/548/EEC or 1999/45/EC)

Xn

harmful

R phrase(s):	R 20/22	Harmful by inhalation and if swallowed.
	R 36	Irritating to eyes.
S phrase(s):	S (2)	Keep out of the reach of children.
	S 26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

2.3 Other hazards

No risks worthy of mention.

SECTION 3: Composition / information on ingredients

3.1 Substances

Chemical characterization: C7 H8 O = C6H5-CH2OH Benzyl alcohol >= 99,9%

CAS-Number: 100-51-6
EC-number: 202-859-9
EU-number: 603-057-00-5
RTECS-Number: DN3150000

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: Take off immediately all contaminated clothing.

After inhalation: Move victim to fresh air; if necessary, provide artificial respiration or oxygen. Immediately get medical attention.

In case of skin contact: After contact with skin, wash immediately with plenty of water.
Seek medical treatment in case of troubles.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart.
In case of troubles or persistent symptoms, consult an opthalmologist.

After swallowing: Drink one or two glasses of water. Give activated carbon (20 - 40 g in a suspension of 10%).
Never give anything by mouth to an unconscious person.
Caution if victim vomits: Risk of aspiration! Keep airway open.
Immediately get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

After resorption: nausea, headache, agitation, inebriation, CNS disorders, apnea, spasms, fatigue, drowsiness, unconsciousness.
Chronic toxicity: cardiac arrhythmias.
In case of inhalation: Mucous membrane irritation, cough and shortage of breath.
In case of ingestion: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.Vomiting, diarrhoea.
After contact with skin: Danger of cutaneous absorption.

4.3 Indication of any immediate medical attention and special treatment needed

As a laxative, affected person should drink sodium sulfate (1 tablespoon in 1/4 L water).

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:
Water fog, foam, extinguishing powder, carbon dioxide.

Extinguishing media which must not be used for safety reasons:
High power water jet

5.2 Special hazards arising from the substance or mixture

Combustible.
May form dangerous gases and vapours in case of fire.
With air, vapours form potentially explosive mixtures, which are heavier than air.
In case of fire may be liberated: carbon monoxide and carbon dioxide.

5.3 Advice for firefighters

Special protective equipment for firefighters:
Wear self-contained breathing apparatus.

Additional information: Hazchem-Code: -
Do not allow fire water to penetrate into surface or ground water.
Use fine water spray to cool endangered containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Provide fresh air. Avoid contact with the substance. Do not breathe vapour/aerosol. Wear protective equipment.

6.2 Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents) and place in closed containers for disposal. Final cleaning.
Use only spark proof tools.
In case of greater quantities: Collect mechanically (use only explosion-proof equipment when pumping out).

6.4 Reference to other sections

Refer additionally to chapter 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling: Execute works under fume hood. Do not breathe vapours.
Avoid contact with skin and eyes.
Provide adequate ventilation, and local exhaust as needed.
Wear protective equipment.

Precautions against fire and explosion:
Keep away from sources of ignition. - No smoking.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:
Keep containers tightly closed and at a temperature between 15 °C and 25 °C. Protect from light.

Hints on joint storage: Do not store together with oxidizing agents, strong acids, Acid halides or iron. Keep away from food, drink and animal feeding stuffs.

Storage class: 10 = Combustible liquids, unless storage class 3

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Additional information: Contains no substances with occupational exposure limit values.

DNEL/DMEL: Systemic effects:
DNEL workers, long-term, inhalative: 90 mg/m³
DNEL workers, short-term, inhalative: 450 mg/m³
DNEL workers, long-term, dermal: 9,5 mg/kg bw
DNEL workers, short-term, dermal: 47 mg/kg bw
DNEL consumers, long-term, inhalative: 19,1 mg/m³
DNEL consumers, short-term, inhalative: 95,5 mg/m³
DNEL consumers, long-term, dermal: 5,7 mg/kg bw
DNEL consumers, short-term, dermal: 28,5 mg/kg bw
DNEL consumers, long-term, oral: 5 mg/kg bw
DNEL consumers, short-term, oral: 25 mg/kg bw

PNEC: PNEC water (freshwater): 1 mg/L
PNEC water (marine water): 0,1 mg/L
PNEC water (intermittent release): 2,3 mg/L
PNEC sewage treatment plant: 39 mg/L
PNEC sediment (freshwater): 5,27 mg/kg dw
PNEC sediment (marine water): 0,527 mg/kg dw
PNEC soil: 0,456 mg/kg dw

8.2 Exposure controls

Execute works under fume hood.
Provide adequate ventilation, and local exhaust as needed.

Occupational exposure controls

Respiratory protection: When vapours form: Use filter type A (= against vapours of organic substances) according to EN 14387.

Hand protection: Protective gloves according to EN 374.
Glove material: butyl caoutchouc (butyl rubber)-Layer thickness: 0,7 mm.
Breakthrough time: > 480 Min.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to EN 166.

Body protection: Wear suitable protective clothing.

General protection and hygiene measures:
When using do not eat, drink or smoke.
After work, wash hands and face.
Take off immediately all contaminated clothing.
Do not breathe vapour/aerosol. Avoid contact with skin and eyes.
Safety shower and eye wash station should be easily accessible to the work area.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Physical state: liquid Colour: colourless
Odour:	weak aromatic
Odour threshold:	no data available
pH value:	no data available
Melting point/melting range:	-15.4 ℃ (1013 hPa)
Boiling temperature/boiling range:	205.3 ℃ (1013 hPa)
Flash point/flash point range:	100.4 ℃ (1013 hPa)
Vapourisation rate:	no data available
Flammability:	This product is non-flammable.

Explosive properties:	Not explosive
Explosion limits:	LEL (Lower Explosion Limit): 1.30 Vol-% UEL (Upper Explosive Limit): 13.00 Vol-%
Vapour pressure:	at 20 °C: 0.07 hPa
Vapour density:	no data available
Density:	at 20 °C: 1.045 g/mL
Solubility:	easily soluble in alcohol, ether
Water solubility:	at 25 °C: 40 g/L
Partition coefficient n-octanol/water:	1.05 log P(o/w) Appreciable bio-accumulation is not to be expected (log P(o/w 1-3).
Autoflammability:	436 °C (1013 hPa)
Thermal decomposition:	no data available
Viscosity, dynamic:	at 20 °C: 5.84 mPa*s
Explosive properties:	Not explosive
Oxidizing characteristics:	none

9.2 Other information

Ignition temperature:	435 °C (DIN 51794)
Additional information:	Molecular weight: 108,14 g/mol Relative vapour density at 20 °C (air=1): 3,72 Surface tension: 39 mN/m/20 °C dissociation constant pKa/25 °C: 15,4

SECTION 10: Stability and reactivity

10.1 Reactivity

Exothermic reactions with oxidizing agents and sulphuric acid
Light-sensitive. Sensitive to air: Oxidation to Benzaldehyde.

10.2 Chemical stability

Product is stable under normal storage conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerisation with acids, iron and Warmness.
Danger of dust explosion. Danger of bursting container.
Danger of explosion with Acid halides.

10.4 Conditions to avoid

Protect from excessive heat.
With air, vapours form potentially explosive mixtures, which are heavier than air.

10.5 Incompatible materials

Unsuitable materials: May attack plastics.

10.6 Hazardous decomposition products

In case of fire may be liberated: carbon monoxide and carbon dioxide.

Thermal decomposition:	no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:
LD50 Rat, oral: 1620 mg/kg
LD50 Rabbit, dermal: 2000 mg/kg
LC50 Rat, inhalative: > 5000 mg/[m3]/4h (OECD 403)

Toxicological effects: Acute toxicity (oral): Acute Tox. 4; H302 = Harmful if swallowed.

Acute toxicity (dermal): Lack of data.

Acute toxicity (inhalative): Acute Tox. 4; H332 = Harmful if inhaled.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.
Rabbit: Not an irritant (OECD 404)

Eye damage/irritation: Eye Irrit. 2; H319 = Causes serious eye irritation.

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Based on available data, the classification criteria are not met.
Maximisation test: negative (OECD 406).

Germ cell mutagenicity/Genotoxicity: Based on available data, the classification criteria are not met.
Ames test: negative

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

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

Effects on or via lactation: Lack of data.

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

Specific target organ toxicity (repeated exposure): Based on available data, the classification criteria are not met.
NOAEL Mouse oral: 200 mg/kg/d
NOAEC Rat inhalative: 1072 mg/m³ Air

Aspiration hazard: Lack of data.

Symptoms

After resorption: nausea, headache, agitation, inebriation, CNS disorders, apnea, spasms, fatigue, drowsiness, unconsciousness.
Chronic toxicity: cardiac arrhythmias.
In case of inhalation: Mucous membrane irritation, cough and shortage of breath.
In case of ingestion:
Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.
Vomiting, diarrhoea.
After contact with skin: Danger of cutaneous absorption.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: Algae toxicity:
EC50 Pseudokirchneriella subcapitata (green algae): 770 mg/L/72h (OECD 201).
EC10/NOEC Pseudokirchneriella subcapitata (green algae): 310 mg/L/72h (OECD 201).

Daphnia toxicity:
EC50 Daphnia magna (Big water flea): 230 mg/L/48h (OECD 202).
EC10/NOEC Daphnia magna (Big water flea): 51 mg/L/21d (OECD 211).

Fish toxicity:
LC50 Pimephales promelas (fathead minnow): 460 mg/L/96h.

Water Hazard Class: 1 = slightly hazardous to water (WGK catalog number 216)

12.2. Persistence and degradability

Further details: Biodegradability:
BOD: 92 - 96% / 14 d (OECD 301 C).
DOC reduction: 95 - 97% / 21 d (OECD 302 A).
Product is readily biodegradable.

Oxygen demand:

BOD: 1,55 g/g/5d

BOD/ThOD: 62 %

COD/ThOD: 96 %

ThOD: 2,519 g/g

Effects in sewage plants: EC50/LC50 Nitrosomonas: 390 mg/L"(ISO 8192 and ISO DIS 9509).

12.3 Bioaccumulative potential

Bioconcentration factor (BCF):
Bioconcentration factor (BCF): 1,37 L/kg ww (calculated).
Accumulation in organisms is not to be expected.

12.4 Mobility in soil

Koc at 20 °C: 527,3
Henry constant (25 °C): 0,0879 Pa*m³/mol

12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6 Other adverse effects

General information: Do not allow to enter into ground-water, surface water or drains.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 07 01 04* = Organic solvents, halogen-free
* = Evidence for disposal must be provided.

Recommendation: Incinerate as hazardous waste according to applicable local, state, and federal regulations. Do not dispose of with household waste.
Do not empty into drains.

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation.
Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number

not applicable

14.2 UN proper shipping name

ADR/RID, IMDG, IATA: Not restricted

14.3 Transport hazard class(es)

not applicable

14.4 Packing group

not applicable

14.5 Environmental hazards

Marine pollutant: No

14.6 Special precautions for user

No dangerous good in sense of these transport regulations.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

no data available

SECTION 15: Regulatory information

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

National regulations - Great Britain

Hazchem-Code: -

National regulations - EC member states

Volatile organic compounds (VOC):
100 % by weight

Labelling of packaging with <= 125mL content

Signal word: **Warning**

Hazard statements:	H302	Harmful if swallowed.
	H332	Harmful if inhaled.
Safety precautions:	P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
	P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P501	Dispose of contents/container to hazardous or special waste collection point.

National regulations - USA

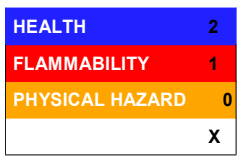
TSCA Inventory: listed
TSCA HPVC: not listed
Clean Air Act:
SOCMI Chemical: yes

Other Environmental Laws:
RCRA Groundwater Monitoring: Methods 8270 / PQL 20

Hazard rating systems:

NFPA Hazard Rating:
Health: 2 (Moderate)
Fire: 1 (Slight)
Reactivity: 0 (Minimal)

HMIS Version III Rating:
Health: 2 (Moderate)
Flammability: 1 (Slight)
Physical Hazard: 0 (Minimal)
Personal Protection: X = Consult your supervisor



National regulations - Canada

DSL: listed

15.2 Chemical Safety Assessment

For this substance a chemical safety assessment has been carried out.

SECTION 16: Other information

Further information

Literature: ICSC 0833

Reason of change: Changes in section 1: REACH registration No.
Changes in section 2: classification, labelling
Changes in section 9: General revision
Changes in section 11 - 12: General revision
General revision

Date of first version: 01.04.2010

Department issuing data sheet

Contact person: see section 1: Dept. responsible for information

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.