

SAFETY DATA SHEET

In accordance with Regulation (EC) 1907/2006 (REACH), Annex II

BENZYL ALCOHOL

Revised on November 24, 2010



1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY	
1.1 Product identifier	
Trade name:	Benzyl alcohol
Chemical name:	Benzyl alcohol
Other names:	Benzene methanol; Phenylcarbinol; α -Hydroxytoluene; Phenylmethanol; (Hydroxymethyl)benzene; α -Toluenol
INDEX number as listed in Annex VI of CLP:	603-057-00-5
CAS number:	100-51-6
REACH registration no:	01-2119492630-38-0001
1.2 Relevant identified uses of the substance or mixture and uses advised against	
Uses:	Uses by workers in industrial settings Manufacturing Formulation (mixing) of preparations and re-packaging Industrial uses: Use of substance as such or in preparations at industrial sites Uses by professional workers Professional uses in the public domain Uses by consumer Consumer uses in private households
Most common technical function of substance (what it does):	Intermediates, Odour agents, Laboratory chemicals, Photosensitive agents and other photo-chemicals, Solvents, Viscosity adjustors, other:Flow improver
Uses advised against:	None identified
1.3 Details of the supplier of the safety data sheet	
Manufacturer:	DSM Special Products B. V. Havennr. 4322 Montrealweg 15 3197 KH Rotterdam-Botlek The Netherlands
Person responsible for the manufacturing:	DSM Special Products B.V. Mauritspark Mijnweg 1 6167 AC Geleen The Netherlands
Person responsible for the Safety Data Sheet:	e-mail address of company responsible for the SDS: Purox.info@dsm.com
1.4 Emergency telephone number	
Emergency phone number:	Tel: +31 (0)181 249285
2. HAZARDS IDENTIFICATION	
2.1 Classification of the substance or mixture	
(see also Chapter 16 for information about the classification)	

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Classification in accordance with Regulation 1272/2008 (CLP)		
Hazard statements:	H302 H332 H319	Harmful if swallowed Harmful if inhaled Causes serious eye irritation
Classification in accordance with Directive 67/548 (DSD)		
Risk phrases:	R20/R22 R36	Harmful by inhalation and if swallowed Irritating to eyes
2.2 Label elements		
Labelling in accordance with Regulation 1272/2008 (CLP)		
Hazard Pictogram(s):		
Signal word:	Warning	
Hazard statements:	H302 H332 H319	Harmful if swallowed Harmful if inhaled Causes serious eye irritation
Precautionary statements:	P102 P261 P270 P271 P280 P305+351+338	Keep out of reach of children Avoid breathing vapors/spray Do not eat, drink or smoke when using this product Use only outdoors or in a well-ventilated area Wear protective gloves/protective clothing/eye protection/face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Classification in accordance with Regulation 67/548/EEC		
Hazard pictogram(s):	 Harmful	
Risk phrases:	R20/22	Harmful by inhalation and if swallowed
Safety phrases:	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
2.3 Other hazards		
PBT/vPvB criteria:	As none of the criteria laid down in Annex XIII of the REACH Regulation are fulfilled, Benzyl alcohol is neither a PBT nor a vPvB-substance.	
Other hazards:	Combustible	
3. COMPOSITION/INFORMATION ON INGREDIENTS		
Substances		

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According to the REACH Regulation the product is a substance				
Chemical name	CAS no.	EU no.	IUPAC name	Purity
Benzyl alcohol	100-51-6	202-859-9	Benzyl alcohol	100%
4. FIRST-AID MEASURES				
4.1 Description of first aid measures				
First aid facilities: Ensure that eyewash stations and safety showers are close to the workstation location.				
General:	Protection of first-aiders: Put on appropriate personal protective equipment. Move exposed person to fresh air. Remove contaminated clothing and shoes.			
Eye contact:	Rinse with plenty of running water. Obtain medical attention if symptoms occur.			
Skin contact:	Wash with soap and water. Remove contaminated clothing and shoes. Obtain medical attention if symptoms occur.			
Ingestion:	If swallowed, rinse mouth with water (only if the person is conscious). Seek medical attention.			
Inhalation:	If inhaled, remove to fresh air. Prevent cooling of the person. Keep victim at rest in half-upright position. If not breathing, give artificial respiration. Get medical attention.			
4.2 Most important symptoms and effects				
Eye contact:	May cause eye irritation (redness)			
Skin contact:	Slightly irritating to the skin (redness). May cause allergic reactions in certain individuals.			
Ingestion:	Exposure may cause nausea, headache and vomiting. Exposure to high levels may cause unconsciousness.			
Inhalation:	Inhalation causes headaches, dizziness, drowsiness and nausea and may lead to unconsciousness. Slightly irritating to the respiratory system (coughing).			
5. FIRE-FIGHTING MEASURES				
5.1 Extinguishing media				
Suitable:	Small fire: Use dry chemical or CO ₂ Large fire: Use water, foam or dry chemical powder			
Not suitable:	Not known.			
5.2 Special hazards arising from the substance or mixture				
Unusual fire/explosion hazards: Vapour is explosive in air at temperatures higher than the flash point.				
Hazardous thermal decomposition products: In case of fire, may produce hazardous decomposition products such as carbon monoxide, carbon dioxide.				
5.3 Advice for firefighters				
Special fire-fighting procedures: Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.				
Protection of fire-fighters: Wear suitable protective clothing. Self-contained breathing apparatus.				
6. ACCIDENTAL RELEASE MEASURES				

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6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with eyes, skin, and clothing. Use suitable protective equipment. Consult expert immediately. Keep away from sources of ignition. Take precautionary measures against static discharges. Use explosion-proof electrical (ventilating, lighting and material handling) equipment.

6.2 Environmental precautions

Prevent entry into sewers, basements or confined areas. Dyke if necessary.

6.3 Methods and material for containment and cleaning up

Small spill and leak: Take up with suitable material. Place in a suitable container. Clean up affected area with a large amount of water.

Large spill and leak: Prevent entry into sewers, basements or confined areas. Dyke if necessary. Absorb spill with inert material (e.g. dry sand or earth) and place in a chemical waste container. Recycle, if possible. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Keep away from sources of ignition.

6.4 Reference to other sections

See section 8 for personal protective equipment and section 13 for waste disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Technical measures/ Precautions:	Use with adequate ventilation. Use suitable protective equipment. Avoid contact with eyes, skin and clothing. Ventilation required along the floor. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Take measures against static discharge. Keep away from sources of ignition.
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7.2 Conditions for safe storage, including any incompatibilities

Technical measures/ Storage conditions:	Store in a fireproof location. Keep away from incompatible materials and avoid specific conditions. Ventilation required along the floor. Keep container tightly closed. Store under nitrogen. Store between the following temperatures: -12 and 50 °C.
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Incompatible products:	None known
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Packaging material:	<u>Suitable:</u> Steel containers or polyethylene containers. <u>Not suitable:</u> Iron, aluminium.
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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Regulated occupational exposure limit values:	None
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Recommended occupational and consumer exposure limit values (following from the performed CSA):	Exposure pattern	Derived No Effect Level (DNEL)	
		Workers	General population
	Long-term – dermal, systemic effects	9.5 mg/kg bw/day	5.7 mg/kg bw/day
	Long-term – inhalation, systemic effects	90 mg/m ³	8.11 mg/m ³
	Long-term – oral, systemic effects	Not relevant	5 mg/kg bw/day
	Acute – dermal, systemic effects	47 mg/kg bw/day	29 mg/kg bw/day
	Acute – oral, systemic effects	Not relevant	25 mg/kg bw/day
	Acute – inhalation, systemic effects	450 mg/m ³	40 mg/m ³
8.2 Exposure controls			
Appropriate engineering controls:	Use only with adequate ventilation. Ventilation required along the floor. Use explosion-proof electrical (ventilating, lighting and material handling) equipment.		
Environmental exposure controls:	No special measures required.		
Individual protection measures, such as personal protective equipment:			
Respiratory protection:	Wear filter mask, filtertype A.		
Hand protection:	Wear suitable gloves. Recommended material(s): > 8 hours (breakthrough time): Butyl rubber or Viton. Replace damaged gloves. Gloves made of the following materials are not suitable: natural rubber (latex), neoprene, nitrile rubber.		
Eye protection:	Safety glasses with side shields.		
Skin and body protection:	Wear suitable protective clothing.		
Hygiene measures:	When using do not eat, drink or smoke. Wash hands after handling compounds and before eating, smoking and using the lavatory and at the end of the day.		
Further information:	Advice on personal protection is applicable for high exposure levels. Select proper personal protection based on a risk assessment of the actual exposure situation.		
9. PHYSICAL AND CHEMICAL PROPERTIES			
Appearance:	colourless liquid		
Odour:	slightly aromatic odour.		
Melting/Freezing temperature:	-15.4 °C at 1013 hPa (data from peer reviewed handbook)		

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Boiling temperature: (initial and range)	205.3 °C at 1013 hPa (data from peer-reviewed handbooks)
Flash-point:	100.4 °C at 1013 hPa (data from peer reviewed handbook)
Flammability:	Non flammable (expert statement)
Explosive properties:	Not explosive (expert statement)
Oxidizing properties:	Not oxidizing (expert statement)
Vapour pressure:	22.26 Pa at 25 °C (data from peer reviewed handbook)
Relative density (D4 (20)):	1.045 at 20°C (data from peer reviewed handbook)
Solubility in water:	The substance is readily soluble in water (> 1000 mg/L). 40000 mg/L at 25 °C (data from peer reviewed handbook)
Partition coefficient n-octanol/water:	log Kow 1.05 at 25 °C (data from peer reviewed handbook)
Viscosity:	5.84 mPa s (dynamic) at 25 °C (data from peer reviewed handbook)
Auto ignition temperature:	436°C at 1013 hPa (data from peer reviewed handbook)
Surface tension:	39 mN/m at 20.0°C (1 g/l / in water) (OECD 115, EC A.5: ring method).
10. STABILITY AND REACTIVITY	
10.1 Reactivity	
None identified	
10.2 Chemical stability	
Stable under recommended storage and handling conditions.	
10.3 Possibility of hazardous reactions	
In air to benzaldehyde	
10.4 Conditions to avoid	
Keep away from heat, sparks and flame. Exposure to air.	
10.5 Incompatible materials	
Air, oxidizing substances, acids, iron, aluminium. Attacks many synthetic materials.	
10.6 Hazardous decomposition products	
In air to benzaldehyde	
11. TOXICOLOGICAL INFORMATION	
ACUTE TOXICITY	
Acute oral toxicity:	LD50: 1620 mg/kg
Acute dermal toxicity:	Not available
Acute inhalation toxicity:	LC50: > 4178 mg/m ³ (OECD 403)
LOCAL EFFECTS	

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Skin irritation:	Not irritating to skin (OECD 404)		
Eye irritation:	Irritating (OECD 405)		
Skin sensitization:	Not sensitizing (OECD 406)		
12. ECOLOGICAL INFORMATION			
12.1 Toxicity			
Fish:	96h-LC50: 460 mg/L (OECD 203)		
Daphnia magna:	48h-EC50: 230 mg/l (OECD 202) 21d-NOEC: 51 mg/L (OECD 211)		
Algae:	72h-EC50: 770 mg/L (OECD 201)		
Inhibition of microbial activity:	24h-EC50: 390 mg/L (equivalent or similar to ISO 8192 and ISO DIS 9509)		
12.2 Persistence and degradability			
Biodegradation:	Readily biodegradable (OECD 301C and 301A)		
Hydrolysis:	Not relevant		
12.3 Bioaccumulative potential			
Octanol-water partition coefficient (K _{ow}):	Log K _{ow} = 1.05		
12.4 Results of PBT and vPvB assessment			
	P	B	T
Relevant data:	Readily biodegradable	Log P _{ow} 1.05	Low aquatic toxicity Not CMR classified
PBT and vPvB Criteria fulfilled?	No	No	No
13. DISPOSAL CONSIDERATIONS			
Methods of disposal (waste of residues; contaminated packaging):	Waste must be disposed of in accordance with national and local environmental regulations. Controlled biodegradation in waste water treatment is possible.		
14. TRANSPORT INFORMATION			
ADR/RID:	Not regulated for transport		
ADNR:	Not regulated for transport		
IMDG:	When transported by barge: Substance number 9003, class 9.		
IATA:	Not regulated for transport		
15. REGULATORY INFORMATION			
15.1 Safety, health and environmental regulation/legislation specific for the substance or mixture:	None		

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15.2 Chemical safety assessment:	In accordance with REACH article 14, a Chemical Safety assessment has been carried out for this substance
16. OTHER INFORMATION	
<p>The information provided in this safety data sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any proceed, unless specified in the text.</p>	
<p>Classification in accordance with Regulation 1272/2008, as listed in Annex VI: <i>Harmful if swallowed (H302)</i> <i>Harmful if inhaled (H332)</i></p> <p>Classification in accordance with Regulation 1272/2008, by self-classification based on the performed CSA: <i>Harmful if swallowed (H302)</i> <i>Causes serious eye irritation (H319)</i> <i>Harmful if inhaled (H332)</i></p>	
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ANNEX

This Annex will be updated without undue delay