

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of issue: 09/09/2015

SECTION 1: Identification	
1.1. Identification	
Product form	: Mixture
Product name	: 1000HB-B
Product code	: 1000HB-B
Other means of identification	: 1000HB-B/1, 1000HB-B/5, 1000HB-B/55, 1000HB-B/Q
1.2. Relevant identified uses of the subst	ance or mixture and uses advised against
No additional information available	
1.3. Details of the supplier of the safety d	ata sheet
Protective Industrial Polymers 7875 Bliss Parkway North Ridgeville, Ohio 44039 - USA-Ohio T 440-327-0015 www.protectpoly.com 1.4. Emergency telephone number	
Emergency number	: Chemtrec: 800427-9300 (Outside USA) 703-527-3887
SECTION 2: Hazard(s) identification	
2.1. Classification of the substance or mi	xture
GHS-US classification	
Skin corrosion/irritation, Category 1A H314	
Sensitisation — Skin, Category 1 H317	
Full text of H statements : see section 16	
2.2. Label elements	
GHS-US labelling	
Hazard pictograms (GHS-US)	: GHS05 GHS07
Signal word (GHS-US)	: Danger
Contains	: 1,3-bis(aminomethyl)benzene; 1-Piperazine ethanamine
Hazard statements (GHS-US)	: H314 - Causes severe skin burns and eye damage H317 - May cause an allergic skin reaction
Precautionary statements (GHS-US)	 P260 - Do not breathe mist, dust P261 - Avoid breathing fume P264 - Wash hands thoroughly after handling P272 - Contaminated work clothing must not be allowed out of the workplace P280 - Wear protective clothing P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting P302+P352 - If on skin: Wash with plenty of soap P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a doctor P321 - Specific treatment (see a doctor if symptoms do not go away. on this label) P333+P313 - If skin irritation or rash occurs: Get medical advice/attention P362+P364 - Take off contaminated clothing and wash it before reuse P405 - Store locked up P501 - Dispose of contents/container to in accordance with local regulations

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

- Not applicable
- 3.2. Mixture

Name	Product identifier	%	GHS-US classification
O,O'-Bis(2-aminopropyl)polypropyleneglycol	(CAS No) 9046-10-0	20 - 30	Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
Phenol,4-nonyl-,branched	(CAS No) 84852-15-3	20 - 30	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
1-Piperazine ethanamine	(CAS No) 140-31-8	10 - 20	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Skin Corr. 1A, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412
4-tert-butylphenol	(CAS No) 98-54-4	9.1 - 15	Skin Irrit. 2, H315 Eye Dam. 1, H318
(1,6-Hexanediamine,C,C,C-trimethyl-)	(CAS No) 25620-58-0	6.5 - 11.7	Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314
1,3-bis(aminomethyl)benzene	(CAS No) 1477-55-0	0 - 10	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Corr. 1A, H314
Benzenemethanol	(CAS No) 100-51-6	0 - 5	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2A, H319 Aquatic Acute 2, H401
4-(2,4-dimethylheptan-3-yl)phenol	(CAS No) 25154-52-3	0.26 - 1.3	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-statements: see section 16

SECTION 4: First aid measures	
4.1. Description of first aid measures	
First-aid measures general :	Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation :	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after skin contact :	Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician. Wash with plenty of soap and water. If skin irritation or rash occurs: When symptoms occur: rinse immediately with plenty of water. Get medical advice/attention. Specific treatment (see Consult a doctor/medical service on this label). Wash contaminated clothing before reuse.
First-aid measures after eye contact :	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after ingestion :	Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.
4.2. Most important symptoms and effects	, both acute and delayed
Symptoms/injuries :	Causes severe skin burns and eye damage.
Symptoms/injuries after inhalation :	May cause an allergic skin reaction.
4.3. Indication of any immediate medical at	ttention and special treatment needed

No additional information available

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

according to Federal Register / Vol. 77, No. 58 / Monday,	
SECTION 5: Firefighting measures	
5.1. Extinguishing media	
Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.
5.2. Special hazards arising from the sul	bstance or mixture
Reactivity	: Corrosive vapours.
5.3. Advice for firefighters	
Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
SECTION 6: Accidental release meas	sures
6.1. Personal precautions, protective eq	uipment and emergency procedures
6.1.1. For non-emergency personnel	
Emergency procedures	: Evacuate unnecessary personnel.
6.1.2. For emergency responders	· Equip cleanup crow with proper protection
Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.
6.2. Environmental precautions	
Prevent entry to sewers and public waters. Notify	y authorities if liquid enters sewers or public waters.
6.3. Methods and material for containme	ent and cleaning up
Methods for cleaning up	: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
6.4. Reference to other sections	
See Heading 8. Exposure controls and personal	protection
coo nouting o. Exposure controls and personal	
SECTION 7: Handling and storage	
SECTION 7: Handling and storage	 Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe fume. Avoid contact during pregnancy/while nursing. Avoid breathing fume.
SECTION 7: Handling and storage 7.1. Precautions for safe handling	 Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe fume. Avoid contact during pregnancy/while nursing. Avoid breathing
SECTION 7: Handling and storage 7.1. Precautions for safe handling Precautions for safe handling Hygiene measures	 Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe fume. Avoid contact during pregnancy/while nursing. Avoid breathing fume. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.
SECTION 7: Handling and storage 7.1. Precautions for safe handling Precautions for safe handling Hygiene measures	 Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe fume. Avoid contact during pregnancy/while nursing. Avoid breathing fume. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.
SECTION 7: Handling and storage 7.1. Precautions for safe handling Precautions for safe handling Hygiene measures 7.2. Conditions for safe storage, including	 Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe fume. Avoid contact during pregnancy/while nursing. Avoid breathing fume. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.
SECTION 7: Handling and storage 7.1. Precautions for safe handling Precautions for safe handling Hygiene measures 7.2. Conditions for safe storage, including Technical measures	 Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe fume. Avoid contact during pregnancy/while nursing. Avoid breathing fume. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. ng any incompatibilities Comply with applicable regulations. Keep only in the original container in a cool, well ventilated place away from : Heat sources.
SECTION 7: Handling and storage 7.1. Precautions for safe handling Precautions for safe handling Hygiene measures 7.2. Conditions for safe storage, includin Technical measures Storage conditions	 Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe fume. Avoid contact during pregnancy/while nursing. Avoid breathing fume. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. ng any incompatibilities Comply with applicable regulations. Keep only in the original container in a cool, well ventilated place away from : Heat sources. Keep container closed when not in use.
SECTION 7: Handling and storage 7.1. Precautions for safe handling Precautions for safe handling Hygiene measures 7.2. Conditions for safe storage, includin Technical measures Storage conditions Incompatible products Incompatible materials	 Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe fume. Avoid contact during pregnancy/while nursing. Avoid breathing fume. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. ng any incompatibilities Comply with applicable regulations. Keep only in the original container in a cool, well ventilated place away from : Heat sources. Keep container closed when not in use. Strong bases. Strong acids. Sources of ignition. Direct sunlight.
SECTION 7: Handling and storage 7.1. Precautions for safe handling Precautions for safe handling Hygiene measures 7.2. Conditions for safe storage, includin Technical measures Storage conditions Incompatible products Incompatible materials SECTION 8: Exposure controls/perset	 Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe fume. Avoid contact during pregnancy/while nursing. Avoid breathing fume. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. ng any incompatibilities Comply with applicable regulations. Keep only in the original container in a cool, well ventilated place away from : Heat sources. Keep container closed when not in use. Strong bases. Strong acids. Sources of ignition. Direct sunlight.
SECTION 7: Handling and storage 7.1. Precautions for safe handling Precautions for safe handling Hygiene measures 7.2. Conditions for safe storage, includin Technical measures Storage conditions Incompatible products Incompatible materials SECTION 8: Exposure controls/pers 8.1. Control parameters	 Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe fume. Avoid contact during pregnancy/while nursing. Avoid breathing fume. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. ng any incompatibilities Comply with applicable regulations. Keep only in the original container in a cool, well ventilated place away from : Heat sources. Keep container closed when not in use. Strong bases. Strong acids. Sources of ignition. Direct sunlight.
SECTION 7: Handling and storage 7.1. Precautions for safe handling Precautions for safe handling Hygiene measures 7.2. Conditions for safe storage, includin Technical measures Storage conditions Incompatible products Incompatible materials SECTION 8: Exposure controls/perset	 Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe fume. Avoid contact during pregnancy/while nursing. Avoid breathing fume. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. ng any incompatibilities Comply with applicable regulations. Keep only in the original container in a cool, well ventilated place away from : Heat sources. Keep container closed when not in use. Strong bases. Strong acids. Sources of ignition. Direct sunlight.
SECTION 7: Handling and storage 7.1. Precautions for safe handling Precautions for safe handling Precautions for safe handling Hygiene measures 7.2. Conditions for safe storage, includin Technical measures Storage conditions Incompatible products Incompatible materials SECTION 8: Exposure controls/pers 8.1. Control parameters (1,6-Hexanediamine,C,C,C-trimethyl-) (25620) Not applicable	 Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe fume. Avoid contact during pregnancy/while nursing. Avoid breathing fume. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. ng any incompatibilities Comply with applicable regulations. Keep only in the original container in a cool, well ventilated place away from : Heat sources. Keep container closed when not in use. Strong bases. Strong acids. Sources of ignition. Direct sunlight.
SECTION 7: Handling and storage 7.1. Precautions for safe handling Precautions for safe handling Hygiene measures 7.2. Conditions for safe storage, includin Technical measures Storage conditions Incompatible products Incompatible materials SECTION 8: Exposure controls/pers 8.1. Control parameters (1,6-Hexanediamine,C,C,C-trimethyl-) (25620)	 Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe fume. Avoid contact during pregnancy/while nursing. Avoid breathing fume. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. ng any incompatibilities Comply with applicable regulations. Keep only in the original container in a cool, well ventilated place away from : Heat sources. Keep container closed when not in use. Strong bases. Strong acids. Sources of ignition. Direct sunlight.
SECTION 7: Handling and storage 7.1. Precautions for safe handling Precautions for safe handling Precautions for safe handling Hygiene measures 7.2. Conditions for safe storage, includin Technical measures Storage conditions Incompatible products Incompatible materials SECTION 8: Exposure controls/personal 8.1. Control parameters (1,6-Hexanediamine,C,C,C-trimethyl-) (25620) Not applicable 4-(2,4-dimethylheptan-3-yl)phenol (25154-52) Not applicable	 Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe fume. Avoid contact during pregnancy/while nursing. Avoid breathing fume. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. ng any incompatibilities Comply with applicable regulations. Keep only in the original container in a cool, well ventilated place away from : Heat sources. Keep container closed when not in use. Strong bases. Strong acids. Sources of ignition. Direct sunlight.
SECTION 7: Handling and storage 7.1. Precautions for safe handling Precautions for safe handling Precautions for safe handling Hygiene measures 7.2. Conditions for safe storage, includin Technical measures Storage conditions Incompatible products Incompatible materials SECTION 8: Exposure controls/perse 8.1. Control parameters (1,6-Hexanediamine,C,C,C-trimethyl-) (25620 Not applicable 4-(2,4-dimethylheptan-3-yl)phenol (25154-52	 Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe fume. Avoid contact during pregnancy/while nursing. Avoid breathing fume. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. ng any incompatibilities Comply with applicable regulations. Keep only in the original container in a cool, well ventilated place away from : Heat sources. Keep container closed when not in use. Strong bases. Strong acids. Sources of ignition. Direct sunlight.
SECTION 7: Handling and storage 7.1. Precautions for safe handling Precautions for safe handling Precautions for safe handling Hygiene measures 7.2. Conditions for safe storage, includin Technical measures Storage conditions Incompatible products Incompatible materials SECTION 8: Exposure controls/pers 8.1. Control parameters (1,6-Hexanediamine,C,C,C-trimethyl-) (25620) Not applicable 4-(2,4-dimethylheptan-3-yl)phenol (25154-52) Not applicable Benzenemethanol (100-51-6)	 Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe fume. Avoid contact during pregnancy/while nursing. Avoid breathing fume. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. ng any incompatibilities Comply with applicable regulations. Keep only in the original container in a cool, well ventilated place away from : Heat sources. Keep container closed when not in use. Strong bases. Strong acids. Sources of ignition. Direct sunlight.
SECTION 7: Handling and storage 7.1. Precautions for safe handling Precautions for safe handling Hygiene measures 7.2. Conditions for safe storage, includin Technical measures Storage conditions Incompatible products Incompatible materials SECTION 8: Exposure controls/perso 8.1. Control parameters (1,6-Hexanediamine,C,C,C-trimethyl-) (2562C Not applicable 4-(2,4-dimethylheptan-3-yl)phenol (25154-52 Not applicable Benzenemethanol (100-51-6) Not applicable	 Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe fume. Avoid contact during pregnancy/while nursing. Avoid breathing fume. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. ng any incompatibilities Comply with applicable regulations. Keep only in the original container in a cool, well ventilated place away from : Heat sources. Keep container closed when not in use. Strong bases. Strong acids. Sources of ignition. Direct sunlight.

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

1,3-bis(aminomethyl)b	enzene (1477-55-0)	
ACGIH	ACGIH Ceiling (mg/m ³)	0.1 mg/m³ (m-Xylene alfa,alfa'-diamine; USA; Momentary value; TLV - Adopted Value)
ACGIH	Remark (ACGIH)	Eye, skin, & GI irr
Phenol,4-nonyl-,brancl	hed (84852-15-3)	
Not applicable		
O,O'-Bis(2-aminopropy	/l)polypropyleneglycol (9046-10-0)	
Not applicable		
1-Piperazine ethanami	ne (140-31-8)	
Not applicable		

8.2. Exposure controls	
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear protective gloves.
Eye protection	: Chemical goggles or face shield.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: Wear appropriate mask.

Other information	: Do not eat, drink or smoke during use.

9.1. Information on basic physical and	chemical properties
Physical state	: Liquid
Appearance	: straw colored liquid.
Colour	: straw colored liquid
Odour	· Ammonical
Odour threshold	: No data available
рН	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: > 435 °F
Flash point	: > 100 °C
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Vapour pressure	: No data available
Relative density	: No data available
Relative vapour density at 20 °C	: No data available
Density	: 1 kg/l
Solubility	 Water: Solubility in water of component(s) of the mixture : Benzenemethanol: 4.4 g/100ml (50 °C) • 4-tert-butylphenol: 0.06 g/100ml (25 °C, insoluble) 1,3-bis(aminomethyl)benzene: Complete • Phenol,4-nonyl-,branched: 5.7 mg/l (25 °C, insoluble) • 1-Piperazine ethanamine: > 10 g/100ml (20 °C, soluble)
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available

Viscosity, kinematic

Viscosity, dynamic

: No data available

: No data available

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Corrosive vapours.

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

Acute toxicity

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. Thermal decomposition generates : Corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

: Not classified

(1,6-Hexanediamine,C,C,C-trimethyl-) (25620-5	58-0)
LD50 oral rat	< 910 mg/kg (Rat; Literature study)
ATE US (oral)	500.000 mg/kg bodyweight
4-(2,4-dimethylheptan-3-yl)phenol (25154-52-3	
ATE US (oral)	500.000 mg/kg bodyweight
Benzenemethanol (100-51-6)	
LD50 oral rat	1620 mg/kg (Rat; Experimental value)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit; Inconclusive, insufficient data)
ATE US (oral)	1620.000 mg/kg bodyweight
ATE US (gases)	4500.000 ppmv/4h
ATE US (vapours)	11.000 mg/l/4h
ATE US (dust,mist)	1.500 mg/l/4h
4-tert-butylphenol (98-54-4)	
LD50 oral rat	> 2000 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value)
LC50 inhalation rat (mg/l)	> 5.6 mg/l/4h (Rat; Experimental value)
ATE US (oral)	3370.000 mg/kg bodyweight
ATE US (dermal)	2621.000 mg/kg bodyweight
1,3-bis(aminomethyl)benzene (1477-55-0)	
LD50 oral rat	930 mg/kg (Rat)
LD50 dermal rabbit	2000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	2.4 mg/l/4h (Rat)
ATE US (oral)	930.000 mg/kg bodyweight
ATE US (dermal)	2000.000 mg/kg bodyweight
ATE US (vapours)	2.400 mg/l/4h
ATE US (dust,mist)	2.400 mg/l/4h
Phenol,4-nonyl-,branched (84852-15-3)	
LD50 oral rat	1882 mg/kg (Rat; Other; Experimental value; 1412 mg/kg bodyweight; Rat; Experimental value)
ATE US (oral)	1882.000 mg/kg bodyweight
ATE US (dermal)	2040.000 mg/kg bodyweight

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

1-Piperazine ethanamine (140-31-8)	
ATE US (oral)	1470.000 mg/kg bodyweight
ATE US (dermal)	880.000 mg/kg bodyweight
Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Depreductive tovicity	. Not close field
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated	: Not classified
exposure)	
Assistation honord	. Not close field
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: May cause an allergic skin reaction.
SECTION 42. Eacle vised information	
SECTION 12: Ecological information	
12.1. Toxicity	

Ecology - general

: Not classified due to lack of data.

(1,6-Hexanediamine,C,C,C-trimethyl-) (256	S20-58-0)
LC50 fish 1	172 mg/l (LC50; 48 h; Leuciscus idus; Static system)
EC50 Daphnia 1	31.5 mg/l (EC50; 24 h; Daphnia magna)
Threshold limit algae 1	29.5 mg/l (EC50; 72 h; Scenedesmus subspicatus)
Benzenemethanol (100-51-6)	
LC50 fish 1	460 mg/l (LC50; EPA OPP 72-1; 96 h; Pimephales promelas; Static system; Fresh water; Experimental value)
4-tert-butylphenol (98-54-4)	
EC50 Daphnia 1	3.9 mg/l (EC50; 48 h)
LC50 fish 2	5.14 mg/l (LC50; 96 h)
Threshold limit algae 2	11.2 mg/l (EC50; 72 h)
1,3-bis(aminomethyl)benzene (1477-55-0)	
EC50 Daphnia 1	16 mg/l (EC50; 48 h)
LC50 fish 2	> 100 mg/l (LC50; 96 h)
Threshold limit algae 1	12 mg/l (EC50; 72 h)
Phenol,4-nonyl-,branched (84852-15-3)	
EC50 Daphnia 2	0.085 mg/l (EC50; ASTM E729-88; 48 h; Daphnia magna; Semi-static system; Fresh water; Experimental value)
Threshold limit algae 2	0.027 mg/l (EC50; EPA OTS 797.1050; 96 h; Skeletonema costatum; Static system; Salt water; Experimental value)
1-Piperazine ethanamine (140-31-8)	
LC50 fish 1	> 100 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Oncorhynchus mykiss; Semi- static system; Fresh water; Experimental value)
EC50 Daphnia 1	58 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system)
Threshold limit algae 2	> 1000 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Selenastrum capricornutum; Fresh water)

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2.2. Persistence and degradability	
1000HB-B	
Persistence and degradability	Not established.
(1,6-Hexanediamine,C,C,C-trimethyl-) (2562	20-58-0)
Persistence and degradability	Not readily biodegradable in water. No (test)data on mobility of the substance available. Photodegradation in the air.
Benzenemethanol (100-51-6)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	1.6 g O₂/g substance
Chemical oxygen demand (COD)	2.4 g O ₂ /g substance
ThOD	2.5 g O₂/g substance
4-tert-butylphenol (98-54-4)	
Persistence and degradability	Readily biodegradable in water. Low potential for mobility in soil. Photolysis in the air.
ThOD	2.77 g O₂/g substance
1,3-bis(aminomethyl)benzene (1477-55-0)	
Persistence and degradability	Not readily biodegradable in water.
Phenol,4-nonyl-,branched (84852-15-3)	
Persistence and degradability	Inherently biodegradable. Biodegradability in soil: no data available. Adsorbs into the soil. Photodegradation in the air.
1-Piperazine ethanamine (140-31-8)	
Persistence and degradability	Not readily biodegradable in water. Low potential for mobility in soil.
Chemical oxygen demand (COD)	0.56 g O₂/g substance
2.3. Bioaccumulative potential	
1000HB-B	
Bioaccumulative potential	Not established.
(1,6-Hexanediamine,C,C,C-trimethyl-) (2562	
Log Pow	0.7 (Literature)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Divaccumulative potential	Low potential for bioaccumulation (Log Now < 4).
	Low potential for bioaccumulation (Log Row < 4).
Benzenemethanol (100-51-6)	
Benzenemethanol (100-51-6) Log Pow	1-1.1,Experimental value; Other; 20 °C
Benzenemethanol (100-51-6) Log Pow Bioaccumulative potential	
Benzenemethanol (100-51-6) Log Pow Bioaccumulative potential 4-tert-butylphenol (98-54-4)	1-1.1,Experimental value; Other; 20 °C Low potential for bioaccumulation (Log Kow < 4).
Benzenemethanol (100-51-6) Log Pow Bioaccumulative potential 4-tert-butylphenol (98-54-4) BCF fish 1	1-1.1,Experimental value; Other; 20 °C Low potential for bioaccumulation (Log Kow < 4).
Benzenemethanol (100-51-6) Log Pow Bioaccumulative potential 4-tert-butylphenol (98-54-4) BCF fish 1 BCF fish 2	1-1.1,Experimental value; Other; 20 °C Low potential for bioaccumulation (Log Kow < 4).
Benzenemethanol (100-51-6) Log Pow Bioaccumulative potential 4-tert-butylphenol (98-54-4) BCF fish 1 BCF fish 2 BCF other aquatic organisms 1	1-1.1,Experimental value; Other; 20 °C Low potential for bioaccumulation (Log Kow < 4).
Benzenemethanol (100-51-6) Log Pow Bioaccumulative potential 4-tert-butylphenol (98-54-4) BCF fish 1 BCF fish 2 BCF other aquatic organisms 1 BCF other aquatic organisms 2	1-1.1, Experimental value; Other; 20 °C Low potential for bioaccumulation (Log Kow < 4).
Benzenemethanol (100-51-6)Log PowBioaccumulative potential4-tert-butylphenol (98-54-4)BCF fish 1BCF fish 2BCF other aquatic organisms 1BCF other aquatic organisms 2	1-1.1,Experimental value; Other; 20 °C Low potential for bioaccumulation (Log Kow < 4).
Benzenemethanol (100-51-6)Log PowBioaccumulative potential4-tert-butylphenol (98-54-4)BCF fish 1BCF fish 2BCF other aquatic organisms 1BCF other aquatic organisms 2Log Pow	1-1.1, Experimental value; Other; 20 °C Low potential for bioaccumulation (Log Kow < 4).
Benzenemethanol (100-51-6)Log PowBioaccumulative potential4-tert-butylphenol (98-54-4)BCF fish 1BCF fish 2BCF other aquatic organisms 1BCF other aquatic organisms 2Log PowBioaccumulative potential	1-1.1, Experimental value; Other; 20 °C Low potential for bioaccumulation (Log Kow < 4).
Benzenemethanol (100-51-6) Log Pow Bioaccumulative potential 4-tert-butylphenol (98-54-4) BCF fish 1 BCF fish 2 BCF other aquatic organisms 1 BCF other aquatic organisms 2 Log Pow Bioaccumulative potential 1,3-bis(aminomethyl)benzene (1477-55-0) BCF fish 1	1-1.1,Experimental value; Other; 20 °C Low potential for bioaccumulation (Log Kow < 4).
Benzenemethanol (100-51-6) Log Pow Bioaccumulative potential 4-tert-butylphenol (98-54-4) BCF fish 1 BCF fish 2 BCF other aquatic organisms 1 BCF other aquatic organisms 2 Log Pow Bioaccumulative potential 1,3-bis(aminomethyl)benzene (1477-55-0) BCF fish 1	1-1.1,Experimental value; Other; 20 °C Low potential for bioaccumulation (Log Kow < 4).
Benzenemethanol (100-51-6) Log Pow Bioaccumulative potential 4-tert-butylphenol (98-54-4) BCF fish 1 BCF fish 2 BCF other aquatic organisms 1 BCF other aquatic organisms 2 Log Pow Bioaccumulative potential 1,3-bis(aminomethyl)benzene (1477-55-0) BCF fish 1 Log Pow	1-1.1,Experimental value; Other; 20 °C Low potential for bioaccumulation (Log Kow < 4).
Benzenemethanol (100-51-6) Log Pow Bioaccumulative potential 4-tert-butylphenol (98-54-4) BCF fish 1 BCF fish 2 BCF other aquatic organisms 1 BCF other aquatic organisms 2 Log Pow Bioaccumulative potential 1,3-bis(aminomethyl)benzene (1477-55-0) BCF fish 1 Log Pow Bioaccumulative potential Phenol,4-nonyl-,branched (84852-15-3)	1-1.1,Experimental value; Other; 20 °C Low potential for bioaccumulation (Log Kow < 4).
Benzenemethanol (100-51-6) Log Pow Bioaccumulative potential 4-tert-butylphenol (98-54-4) BCF fish 1 BCF fish 2 BCF other aquatic organisms 1 BCF other aquatic organisms 2 Log Pow Bioaccumulative potential 1,3-bis(aminomethyl)benzene (1477-55-0) BCF fish 1 Log Pow Bioaccumulative potential	1-1.1,Experimental value; Other; 20 °C Low potential for bioaccumulation (Log Kow < 4).
Benzenemethanol (100-51-6) Log Pow Bioaccumulative potential 4-tert-butylphenol (98-54-4) BCF fish 1 BCF fish 2 BCF other aquatic organisms 1 BCF other aquatic organisms 2 Log Pow Bioaccumulative potential 1,3-bis(aminomethyl)benzene (1477-55-0) BCF fish 1 Log Pow Bioaccumulative potential Phenol,4-nonyl-,branched (84852-15-3) BCF fish 1	1-1.1, Experimental value; Other; 20 °C Low potential for bioaccumulation (Log Kow < 4).

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

1-Piperazine ethanamine (140-31-8)	
BCF fish 1	<= >0.3<=6.3,BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; >4<=6 weeks; Cyprinus carpio; Flow-through system; Fresh water; Read-across
Log Pow	-1.48 (Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

Benzenemethanol (100-51-6)	
Surface tension	0.04 N/m (20 °C)
4-tert-butylphenol (98-54-4)	
Log Koc	log Koc,3.1; QSAR
Phenol,4-nonyl-,branched (84852-15-3)	
Log Koc	log Koc,Other; >= 4.35 - <= 5.69; Experimental value; GLP
1-Piperazine ethanamine (140-31-8)	
Log Koc	log Koc,4.57; Read-across; GLP
12.5. Other adverse effects	
Effect on the global warming	: No known ecological damage caused by this product.
Other information	: Avoid release to the environment.
SECTION 13: Disposal consideration	ons
3.1. Waste treatment methods	
Vaste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to Remove waste in accordance with local and/or national regulations.
Ecology - waste materials	: Avoid release to the environment.
SECTION 14: Transport information	1
Department of Transportation (DOT)	

De	epartment of	Transportation	

In accordance with DOI	
Transport document description	

UN-No.(DOT) Proper Shipping Name (DOT) Class (DOT) Hazard labels (DOT) : UN2735 Amines, liquid, corrosive, n.o.s., 8, III

- : UN2735
- : Amines, liquid, corrosive, n.o.s.
- : 8 Class 8 Corrosive material 49 CFR 173.136
- : 8 Corrosive



- Packing group (DOT) DOT Packaging Non Bulk (49 CFR 173.xxx) DOT Packaging Bulk (49 CFR 173.xxx) DOT Symbols
- : III Minor Danger
- : 203
- : 241
- : G Identifies PSN requiring a technical name

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

DOT Special Provisions (49 CFR 172.102)	:	IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672) T7 - 4 178.274(d)(2) Normal
DOT Packaging Exceptions (49 CFR 173.xxx)	:	154
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	60 L
DOT Vessel Stowage Location	:	A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel
DOT Vessel Stowage Other	:	52 - Stow "separated from" acids
Other information	:	No supplementary information available.
TDG		
No additional information available		
Transport by sea		
UN-No. (IMDG)	:	2735
Proper Shipping Name (IMDG)	:	AMINES, LIQUID, CORROSIVE, N.O.S.
Class (IMDG)	:	8 - Corrosive substances
Packing group (IMDG)	:	III - substances presenting low danger
Air transport		
UN-No. (IATA)	:	2735
Proper Shipping Name (IATA)	:	Amines, liquid, corrosive, n.o.s.
Class (IATA)	:	8 - Corrosives
Packing group (IATA)	:	III - Minor Danger
SECTION 15: Regulatory information		
15.1. US Federal regulations		

(1,6-Hexanediamine,C,C,C-trimethyl-) (25620-58-0)			
Listed on the United States TSCA (Toxic Substances Control Act) inventory			
4-(2,4-dimethylheptan-3-yl)phenol (25154-52-3)			
Listed on the United States TSCA (Toxic Substances Control Act) inventory			
Benzenemethanol (100-51-6)			
Listed on the United States TSCA (Toxic Substances Control Act) inventory			
4-tert-butylphenol (98-54-4)			
Listed on the United States TSCA (Toxic Substances Control Act) inventory			
1,3-bis(aminomethyl)benzene (1477-55-0)			
Listed on the United States TSCA (Toxic Substances Control Act) inventory			
Phenol,4-nonyl-,branched (84852-15-3)			
Listed on the United States TSCA (Toxic Substances Control Act) inventory			
O,O'-Bis(2-aminopropyl)polypropyleneglycol (9046-10-0)			
Listed on the United States TSCA (Toxic Substances Control Act) inventory			
1-Piperazine ethanamine (140-31-8)			
Listed on the United States TSCA (Toxic Substances Control Act) inventory			

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

(1,6-Hexanediamine,C,C,C-trimethyl-) (25620-58-0)	
U.S New Jersey - Right to Know Hazardous Substance List	
1,3-bis(aminomethyl)benzene (1477-55-0)	
U.S New Jersey - Right to Know Hazardous Substance List	
1-Piperazine ethanamine (140-31-8)	
U.S New Jersey - Right to Know Hazardous Substance List	

SECTION 16: Other information

Training advice	: Normal use of this product shall imply use in accordance with the instructions on the packaging.
Other information	: Disclaimer: This SDS to the best of our knowledge conforms to the requirements of OSHA 20 CFR 1910.1200 and summarizes the health and safety hazard information and general guidance on how to safely handle the material at the date of issue. Each user must review the SDS in the context of how the product will be handled and used in the workplace.

Full text of H-statements:

H227	Combustible liquid
H302	Harmful if swallowed
H311	Toxic in contact with skin
H312	Harmful 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
H332	Harmful if inhaled
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

HMIS III Rating

Health

: 2 Moderate Hazard - Temporary or minor injury may occur

Flammability

Physical

: 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product