We create chemistry

Safety data sheet

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

1.1. Product identifier

ENERTITE* OS 100

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

Recommended use: polyurethane component

1.3. Details of the supplier of the safety data sheet

Company:
BASF plc
PO Box 4, Earl Road, Cheadle Hulme,
Cheadle, Cheshire
SK8 6QG, UNITED KINGDOM

Telephone: +44 161 485-6222
E-mail address: product-safety-north@basf.com

1.4. Emergency telephone number

Telephone: +49 180 2273-112

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]

Acute Tox. 4 (oral)
Eye Dam./Irrit. 1
Skin Corr./Irrit. 2

According to Directive 67/548/EEC or 1999/45/EC

Possible Hazards:
Harmful if swallowed.

For the classifications not written out in full in this section the full text can be found in section 16.

2.2. Label elements

Globally Harmonized System, EU (GHS)

Pictogram:

Signal Word:
Danger

Hazard Statement:

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.

Precautionary Statements (Prevention):

P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements (Response):

P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P303 + P352	IF ON SKIN (or hair): Wash with plenty of soap and water.
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 POISON CENTER or doctor/physician.

Precautionary Statements (Disposal):

P501	Dispose of contents/container to hazardous or special waste collection point.

According to Regulation (EC) No 1272/2008 [CLP]

Hazard determining component(s) for labelling: 2-((2-(dimethylamino)ethyl)methylamino)ethanol, methylbis(2-dimethylaminoethyl)amine, tris(2-chloro-1-methylethyl)phosphate

According to Directive 67/548/EEC or 1999/45/EC

Directive 1999/45/EC ('Preparation Directive')

Hazard symbol(s)
Xn Harmful.

R-phrase(s)
R22 Harmful if swallowed.

S-phrase(s)
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

Hazard determining component(s) for labelling: 2-((2-(dimethylamino)ethyl)methylamino)ethanol, methylbis(2-dimethylaminoethyl)amine, tris(2-chloro-1-methylethyl)phosphate

2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

No specific dangers known, if the regulations/notes for storage and handling are considered.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical nature

Preparation based on: polyetherpolyol, flameproofing agent, catalyst, additives

Hazardous ingredients (GHS)
according to Regulation (EC) No. 1272/2008

2-[[2-(dimethylamino)ethyl]methylamino]ethanol

Content (W/W): >= 1 % - < 5 %	Skin Corr./Irrit. 2
CAS Number: 2212-32-0	Eye Dam./Irrit. 1
EC-Number: 218-658-4	H315, H318

bis(2-dimethylaminoethyl)(methyl)amine

Content (W/W): >= 1 % - < 3 %	Acute Tox. 4 (oral)
CAS Number: 3030-47-5	Acute Tox. 3 (dermal)
EC-Number: 221-201-1	Skin Corr./Irrit. 1B
REACH registration number: 01-2119979537-18	Acute Tox. 3 (Inhalation - vapour)
INDEX-Number: 612-109-00-6	Aquatic Chronic 3
	H302, H311, H314, H331, H412

tris(2-chloro-1-methylethyl) phosphate

Content (W/W): >= 25 %	Acute Tox. 4 (oral)
CAS Number: 13674-84-5	H302
EC-Number: 237-158-7	
REACH registration number: 01-2119486772-26, 01-2119447716-31	

Hazardous ingredients
according to Directive 1999/45/EC

2-[[2-(dimethylamino)ethyl]methylamino]ethanol
Content (W/W): >= 1 % - < 5 %
CAS Number: 2212-32-0
EC-Number: 218-658-4
Hazard symbol(s): Xi
R-phrase(s): 41, 38

bis(2-dimethylaminoethyl)(methyl)amine
Content (W/W): >= 1 % - < 3 %
CAS Number: 3030-47-5
EC-Number: 221-201-1
REACH registration number: 01-2119979537-18
INDEX-Number: 612-109-00-6
Hazard symbol(s): T
R-phrase(s): 20/22, 24, 34, 52/53

tris(2-chloro-1-methylethyl) phosphate
Content (W/W): >= 25 %
CAS Number: 13674-84-5
EC-Number: 237-158-7
REACH registration number: 01-2119486772-26, 01-2119447716-31
Hazard symbol(s): Xn
R-phrase(s): 22

For the classifications not written out in full in this section, including the indication of danger, the hazard symbols, the R phrases, and the hazard statements, the full text is listed in section 16.

SECTION 4: First-Aid Measures

4.1. Description of first aid measures

Immediately remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air. If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.

On skin contact:
Wash thoroughly with soap and water.

On contact with eyes:
Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:
Immediately rinse mouth and then drink plenty of water, do not induce vomiting, seek medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms: Eye irritation, skin irritation

Hazards: Symptoms can appear later.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media:
water spray, dry powder, foam, carbon dioxide

5.2. Special hazards arising from the substance or mixture

carbon monoxide, Carbon dioxide, nitrogen oxides, Phosphorus compounds
The substances/groups of substances mentioned can be released in case of fire.

5.3. Advice for fire-fighters

Special protective equipment:
Wear a self-contained breathing apparatus.

Further information:
Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

SECTION 6: Accidental Release Measures

High risk of slipping due to leakage/spillage of product.

6.1. Personal precautions, protective equipment and emergency procedures
Use personal protective clothing.

6.2. Environmental precautions
Do not empty into drains. Do not discharge into the subsoil/soil.

6.3. Methods and material for containment and cleaning up
For large amounts: Pump off product.
For residues: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). Dispose of contaminated material as prescribed.

6.4. Reference to other sections
Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling
Ensure thorough ventilation of stores and work areas.

Protection against fire and explosion:
No special precautions necessary.

7.2. Conditions for safe storage, including any incompatibilities
Segregate from foods and animal feeds. Segregate from acids. Segregate from oxidants.

Suitable materials for containers: Carbon steel (Iron), High density polyethylene (HDPE), Low density polyethylene (LDPE), tinned carbon steel (Tinplate), Stainless steel 1.4301 (V2)
Further information on storage conditions: Containers should be stored tightly sealed in a dry place.

7.3. Specific end use(s)
For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

Does not contain components with substance specific occupational exposure limits.

Components with PNEC

3030-47-5: methylbis(2-dimethylaminoethyl)amine
freshwater: 0.0549 mg/l
marine water: 0.00549 mg/l
intermittent release: 0.549 mg/l
STP: 100 mg/l
sediment (freshwater): 0.398 mg/kg
sediment (marine water): 0.0398 mg/kg
soil: 0.0472 mg/kg
oral (secondary poisoning): 2 mg/kg

13674-84-5: Tris(2-chloro-1-methylethyl) phosphate
freshwater: 0.64 mg/l
marine water: 0.064 mg/l
intermittent release: 0.51 mg/l
STP: 7.84 mg/l
sediment (freshwater): 7.6 mg/kg
soil: 1.7 mg/kg
oral (secondary poisoning): < 11.6 mg/kg

Components with DNEL

3030-47-5: methylbis(2-dimethylaminoethyl)amine
worker: Long-term exposure- systemic effects, dermal: 0.150 mg/kg
worker: Long-term exposure- systemic effects, Inhalation: 0.529 mg/m3

13674-84-5: Tris(2-chloro-1-methylethyl) phosphate
worker: Long-term exposure- systemic effects, Inhalation: 5.82 mg/m3
worker: Long-term exposure- systemic effects, dermal: 2.08 mg/kg
worker: Short-term exposure - systemic effects, dermal: 8 mg/kg
worker: Short-term exposure - systemic effects, dermal: 14 mg/kg
consumer: Short-term exposure - systemic effects, dermal: 4 mg/kg
consumer: Short-term exposure - systemic effects, dermal: 7 mg/kg

8.2. Exposure controls

Personal protective equipment

Respiratory protection:
Respiratory protection in case of vapour/aerosol release. Particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2)

Hand protection:
Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374):
Use gauntlets.

Eye protection:
Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:
Standard work clothes and shoes.

General safety and hygiene measures
Avoid contact with the skin, eyes and clothing. Wearing of closed work clothing is required additionally to the stated personal protection equipment. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Form:	liquid	
Colour:	colourless	
Odour:	amine-like	
Odour threshold:	not applicable	
pH value:	approx. 6 - 8 (20 °C)	
solidification temperature:	< 0 °C	
Boiling point:	> 140 °C (1,013 hPa)	
Flash point:	> 110 °C	(DIN 51758)
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	
Flammability:	not flammable	
Lower explosion limit:	For liquids not relevant for classification and labelling., The lower explosion point may be 5 - 15 °C below the flash point.	
Upper explosion limit:	For liquids not relevant for classification and labelling.	
Ignition temperature:	> 250 °C	
Vapour pressure:	< 10 mbar (20 °C)	
Density:	> 1.0 g/cm3 (20 °C)	
Relative density:	> 1.0 (20 °C)	
Relative vapour density (air):	not applicable	
Solubility in water:	sparingly soluble	
Partitioning coefficient n-octanol/water (log Kow):	not applicable	
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	

Viscosity, dynamic:
not determined

9.2. Other information

Miscibility with water:
partly miscible
Other Information:
If necessary, information on other physical and chemical parameters is indicated in this section.

SECTION 10: Stability and Reactivity

10.1. Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals: No corrosive effect on metal.

10.2. Chemical stability
The product is stable if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions
No hazardous reactions if stored and handled as prescribed/indicated.

10.4. Conditions to avoid
Temperature: < 0 °C

10.5. Incompatible materials

Substances to avoid:
acids, oxidizing agents, isocyanates

10.6. Hazardous decomposition products

No hazardous decomposition products if stored and handled as prescribed/indicated.

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:
Of moderate toxicity after single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation.

Information on: tris(2-chloro-1-methylethyl) phosphate

Experimental/calculated data:
LD50 rat (oral): 630 mg/kg (Guideline 92/69/EEC, B.1)

Irritation

Assessment of irritating effects:
May cause severe damage to the eyes. Skin contact causes irritation.

Information on: bis(2-dimethylaminoethyl)(methyl)amine
Experimental/calculated data:
Skin corrosion/irritation rabbit: Corrosive. (similar to OECD guideline 404)

Information on: 2-[[2-(dimethylamino)ethyl]methylamino]ethanol
Experimental/calculated data:
Serious eye damage/irritation rabbit: Risk of serious damage to eyes. (OECD Guideline 405)

Respiratory/Skin sensitization

Assessment of sensitization:
The chemical structure does not suggest a sensitizing effect.

Information on: tris(2-chloro-1-methylethyl) phosphate
Experimental/calculated data:
Mouse Local Lymph Node Assay (LLNA) mouse: Non-sensitizing. (OECD Guideline 429)

Germ cell mutagenicity

Assessment of mutagenicity:
The chemical structure does not suggest a specific alert for such an effect.

Carcinogenicity

Assessment of carcinogenicity:
The chemical structure does not suggest a specific alert for such an effect.

Reproductive toxicity

Assessment of reproduction toxicity:
The chemical structure does not suggest a specific alert for such an effect.

Developmental toxicity

Assessment of teratogenicity:
The chemical structure does not suggest a specific alert for such an effect.

Specific target organ toxicity (single exposure)

Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:
Repeated dermal uptake of the substance did not cause substance-related effects. Repeated inhalative uptake of the substance did not cause substance-related effects. Repeated oral uptake of the substance did not cause substance-related effects.

Aspiration hazard

No aspiration hazard expected.

Other relevant toxicity information

The product has not been tested. The statement has been derived from the properties of the individual components.

SECTION 12: Ecological Information

12.1. Toxicity

Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms.

Information on: tris(2-chloro-1-methylethyl) phosphate
Toxicity to fish:
LC50 (96 h) 51 mg/l, Pimephales promelas (Fish test acute, static)

LC50 (96 h) 56 mg/l, Brachydanio rerio (Fish test acute, static)

Information on: tris(2-chloro-1-methylethyl) phosphate
Aquatic invertebrates:
EC50 (48 h) 131 mg/l, Daphnia magna (Daphnia test acute, static)
The statement of the toxic effect relates to the analytically determined concentration.

Information on: tris(2-chloro-1-methylethyl) phosphate
Aquatic plants:
EC50 (72 h) 82 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)
Nominal concentration.

Information on: tris(2-chloro-1-methylethyl) phosphate
Microorganisms/Effect on activated sludge:
EC50 (3 h) 784 mg/l, activated sludge (DIN EN ISO 8192, aquatic)
Nominal concentration.

12.2. Persistence and degradability

Assessment biodegradation and elimination (H2O):
Poorly biodegradable.

Elimination information:
Poorly biodegradable.

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:
Does not significantly accumulate in organisms.

12.4. Mobility in soil

Assessment transport between environmental compartments:
Adsorption in soil: Adsorption to solid soil phase is not expected.

12.5. Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria.

12.6. Other adverse effects

The product does not contain substances that are listed in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

12.7. Additional information

Adsorbable organically-bound halogen (AOX):
The product contains according to the formulation, organically bound halogen. It can increase the AOX-value in the water purification plants overflow or if it reaches waters.

Other ecotoxicological advice:
Do not allow to enter soil, waterways or waste water channels. Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations. The product has not been tested. The statement has been derived from the properties of the individual components.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Incinerate in suitable incineration plant, observing local authority regulations.

The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted (United Kingdom).
This product and any uncleaned containers must be disposed of as hazardous waste in accordance with the 2005 Hazardous Waste Regulations and amendments (United Kingdom)

Waste key:
07 02 07¤ halogenated still bottoms and reaction residues

Contaminated packaging:
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

SECTION 14: Transport Information

Land transport

ADR

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

RID

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Inland waterway transport

ADN

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable

Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known
Transport in inland waterway vessel:	Not evaluated

Sea transport

IMDG

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Air transport

IATA/ICAO

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

14.1. UN number
See corresponding entries for “UN number” for the respective regulations in the tables above.

14.2. UN proper shipping name
See corresponding entries for “UN proper shipping name” for the respective regulations in the tables above.

14.3. Transport hazard class(es)
See corresponding entries for “Transport hazard class(es)” for the respective regulations in the tables above.

14.4. Packing group
See corresponding entries for “Packing group” for the respective regulations in the tables above.

14.5. Environmental hazards
See corresponding entries for “Environmental hazards” for the respective regulations in the tables above.

14.6. Special precautions for user
See corresponding entries for “Special precautions for user” for the respective regulations in the tables above.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

SECTION 15: Regulatory Information

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

If it is intended to use materials for the manufacture of consumer goods (e. g. products which will come into contact with foodstuffs or with the skin, toys) or medical products, national and international regulations have to be observed. Where no regulations exist, consumer goods or medical products must at least comply with European legislation. We recommend contacting our Sales and our Product Safety departments.

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

The data should be considered when making any assessment under the Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, for example, 'COSHH Essentials' (United Kingdom).
This product is classified under the Chemicals (Hazard Information and Packaging) Regulations, (CHIP) (United Kingdom).

15.2. Chemical Safety Assessment

Chemical Safety Assessment not yet performed due to registration timelines. Exposure scenarios for the mixture can not be provided at the moment because exposure scenarios are not yet available for all relevant substances due to registration timelines. For advice on essential measures see sections 7 and 8 of this safety data sheet.

SECTION 16: Other Information

Full text of the classifications, including the indication of danger, the hazard symbols, the R phrases, and the hazard statements, if mentioned in section 2 or 3:

Xi	Irritant.
T	Toxic.
Xn	Harmful.
41	Risk of serious damage to eyes.
38	Irritating to skin.
20/22	Harmful by inhalation and if swallowed.
24	Toxic in contact with skin.
34	Causes burns.
52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
22	Harmful if swallowed.
Acute Tox.	Acute toxicity
Eye Dam./Irrit.	Serious eye damage/eye irritation
Skin Corr./Irrit.	Skin corrosion/irritation
Aquatic Chronic	Hazardous to the aquatic environment - chronic
H315	Causes skin irritation.
H318	Causes serious eye damage.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H331	Toxic if inhaled.
H412	Harmful to aquatic life with long lasting effects.

If you have any queries relating to this MSDS, it's contents or any other product safety related questions, please write to the following e-mail address: product-safety-north@basf.com

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.