

NORSEKEM LIMITED, UNIT 6c, STOKES FARM,
BINFIELD ROAD, WOKINGHAM, BERKS, RG40 5PR
TEL: 01189 899729 FAX: 01189 791927
sales@norsekem.co.uk www.norsekem.co.uk

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier NORSEKEM SHUTTAFILL – ALL GRADES – Base Component

Manufacturer/Supplier:

Norsekem Ltd
Unit 6c Stokes Farm
Binfield Road
Wokingham
Berkshire, RG40 5PR
Email: safety@norsekem.co.uk

2 HAZARD IDENTIFICATION

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 3

H226 Flammable liquid and vapour.



GHS08 health hazard

H361d
H372

Suspected of damaging the unborn child.
Causes damage to organs through prolonged or repeated exposure. Route of exposure: Inhalation



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xn; Harmful

R20-48/20-63: Harmful by inhalation. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of harm to the unborn child.



Xi; Irritant

R36/37/38: Irritating to eyes, respiratory system and skin.

R10: Flammable.

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

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Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS02 GHS07 GHS08

Signal word Harmful

Hazard-determining components of labelling:

Styrene

Hazard statements

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H361d Suspected of damaging the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure. Route of exposure: Inhalative.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P260 Do not breathe mist/vapours/spray.

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

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

· <i>Dangerous components:</i>		
CAS: 100-42-5 EINECS: 202-851-5 Reg.nr.: 01-2119457861-32	styrene ☒ Xn R20-48/20-63-65; ☒ Xi R36/37/38 R10 Repr. Cat. 3 ☒ Flam. Liq. 3, H226; ☒ Repr. 2, H361d; STOT RE 1, H372; Asp. Tox. 1, H304; ☒ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; Aquatic Chronic 3, H412	10-25%

Additional information: For the wording of the listed risk phrases refer to section 16.

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4. FIRST AID MEASURES

Description of first aid measures

General information:

Personal protection for the First Aider.

Take affected persons out of danger area and lie down.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Immediately remove any clothing soiled by the product.

After inhalation:

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact:

Immediately wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.

After eye contact:

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing: Do not induce vomiting; call for medical help immediately.

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing agents: CO₂, powder or water spray. Fight larger fires with water spray.

For safety reasons unsuitable extinguishing agents: Water with full jet

Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

Advice for firefighters

Protective equipment:

Wear self-contained respiratory protection. Do not inhale explosion gases or combustion gases.

Additional information

Cool endangered containers with water spray.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Avoid contact with the eyes and skin.

Ensure adequate ventilation

Do not inhale gases / fumes / aerosols. Keep away from ignition sources.

Environmental precautions:

Do not allow to enter sewers/ surface or ground water.

Inform respective authorities in case of seepage into water course or sewage system.

Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Do not flush with water or aqueous cleansing agents

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

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7. HANDLING AND STORAGE

Precautions for safe handling

Keep containers tightly sealed.

Ensure good ventilation at the workplace. Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Fumes can combine with air to form an explosive mixture.

Protect against electrostatic charges.

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and containers: Store only in the original container.

Information about storage in one common storage facility:

Store away from oxidizing agents. Store away from foodstuffs.

Further information about storage conditions:

Store in cool, dry conditions in well sealed container. Store container in a well ventilated area.

Protect from heat and direct sunlight.

Recommended storage temperature: < 30 °C

Specific end use(s) No further relevant information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical facilities: No further data; see item 7

Control parameters

· Ingredients with limit values that require monitoring at the workplace:		
100-42-5 styrene		
WEL (Great Britain)		Short-term value: 1080 mg/m ³ , 250 ppm Long-term value: 430 mg/m ³ , 100 ppm
· DNELs 100-42-5 styrene		
Oral	Long-term exposure - systemic effects	2.1 mg/kg bw/day (general population)
Dermal	Long-term exposure - systemic effects	343 mg/kg bw/day (general population) 406 mg/kg bw/day (worker)
Inhalative	Acute/short-term exposure - local effects	182.75 mg/m ³ (general population) 306 mg/m ³ (worker)
	Acute/short-term exposure - systemic effects	174.25 mg/m ³ (general population) 289 mg/m ³ (worker)
	Long-term exposure - systemic effects	10.2 mg/m ³ (general population) 85 mg/m ³ (worker)
· PNECs 100-42-5 styrene		
PNEC STP	5 mg/l (-)	
PNEC aqua	0.028 mg/l (freshwater) 0.0028 mg/l (marine water) 0.04 mg/l (intermittent releases)	
	PNEC sediment	
	0.614 mg/kg (freshwater) 0.0614 mg/kg (marine water)	
PNEC soil	0.2 mg/kg (soil dw)	

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Additional information: The lists valid during the making were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures: Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Wash hands before breaks and at the end of work.

Keep away from foodstuffs, beverages.

Do not eat, drink, smoke while working. Store protective clothing separately.

Immediately remove all soiled and contaminated clothing Take off contaminated clothing and wash before reuse.

Use skin protection cream for skin protection.

Respiratory protection:

Ensure good ventilation at the workplace.

Adhere to the workplace limit values and or other threshold values.

In case of brief exposure or low pollution use respiratory filter. In case of intensive or longer exposure use self-contained respiratory protection.

Filter A/P2

Protection of hands: Protective Gloves

The glove material has to be impermeable and resistant to the product / the substance/ the preparation .

Check the permeability prior to each use of the glove.

Preventive skin protection by use of skin-protecting agents is recommended.

Eye Protection Safety Glasses

9. PHYSICAL AND CHEMICAL PROPERTIES
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Information on basic physical and chemical properties

General Information

Appearance:

Form: Pasty

Colour: Brown or Grey

Odour: Characteristic

pH-value: Not determined

Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 145 °C

· Flash point:	31 °C
· Ignition temperature:	480 °C
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/ vapour mixtures are possible.
· Explosion limits: Lower:	
Upper:	1.2 Vol % 8.9 Vol %
· Vapour pressure at 20 °C:	6 hPa

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· Density at 20 °C:	1.6 g/cm ³
· Vapour density	Not determined
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· 9.2 Other information	No further relevant information available.

10. STABILITY AND REACTIVITY

Reactivity No decomposition if used according to specifications.

Chemical stability No decomposition if used and stored according to specifications.

Possibility of hazardous reactions

Reacts with peroxides and other radical forming substances. Exothermic polymerization.

Conditions to avoid

Protect from heat.

Avoid naked flames, sparks, other ignition sources and sunlight.

Incompatible materials: No further relevant information available.

Hazardous decomposition products:

Formation of toxic gases is possible during heating or in case of fire.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity:

· LD/LC50 values relevant for classification:		
100-42-5 styrene		
Oral	LD50	5000 mg/kg (rat)
Dermal	LD 50	>2000 mg/kg (rat) (OECD 402)
Inhalative	LC50 /4h	11.8mg/l (rat)

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

· Subacute to chronic toxicity:		
100-42-5 styrene		
Inhalative	NOAEL (subacute)	0.85 mg/l (rat) (13w, 6h/day, Vapour)
	NOAEL (subchronic)	0.8 mg/l (rat) (OECD 453, 2a, 6h/day, Vapour)

Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful

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Irritant

Sensitisation No sensitizing effects known

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Suspected of damaging the unborn child. Repr. 2

· Carcinogenicity		
100-42-5 styrene		
Inhalative	NOAEL (carcinogenicity)	4.34 mg/l (rat) (OECD 453, 2a, 6h/day, 5d/week, Vapour)
· Reproductive toxicity/Fertility		
100-42-5 styrene		
Inhalative	NOAEL (fertility)	0.65 mg/l (rat, parents) (OECD 416, Vapour)
		0.22 mg/l (rat, F2) (OECD 416, Vapour)
		2.2 mg/l (rat) (OECD 416, Parents, Vapour)
· Reproductive toxicity/Teratogenicity		
100-42-5 styrene		
Inhalative	NOAEL (developmental toxicity)	2.6 mg/l (rat)
	NOAEL (teratogenicity)	2.6 mg/l (rat)
	LOAEL (maternally)	1.3 mg/l (rat)

12. ECOLOGICAL INFORMATION

· Aquatic toxicity:	
100-42-5 styrene	
EC10/96h	0.28 mg/l (<i>Pseudokirchneriella subcapitata</i>) (EPA OTS 797.1050)
EC50/0.5h	≈ 500 mg/l (activated slugde) (OECD 209)
EC50/48h	4.7 mg/l (<i>daphnia magna</i>) (OECD 202)
EC50/72h	4.9 mg/l (<i>Pseudokirchneriella subcapitata</i>) (EPA OTS 797.1050)
LC50/96h	4.02 mg/l (<i>pimephales promelas</i>)
NOEC	1.01 mg/l (<i>daphnia magna</i>) (OECD-211 21d)
· 12.2 Persistence and degradability	
100-42-5 styrene	
Biodegradation	70.9 % (activated slugde) (ISO DIN 9408, 28d, aerob)
· 12.3 Bioaccumulative potential	
100-42-5 styrene	
BCF	74 (-) (calculated)
	13.5 (fish)
log Kow	2.95 (-)
· Behaviour in environmental systems:	
· 12.4 Mobility in soil	
100-42-5 styrene	
Koc	352 (-)
log Koc	2.55 (-)

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Additional ecological information:

General notes:

Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects No further relevant information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Recommendation

Must not be disposed together with household rubbish. Do not allow product to reach sewage system.

Waste disposal key:

The waste codes given above are to be considered recommendations; because of regional and industrial sector specific features, application of different waste codes is possible.

· <i>European waste catalogue</i>	
07 02 08*	<i>other still bottoms and reaction residues</i>

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

· 14.1 UN-Number	
· ADR, IMDG, IATA	UN1866
· 14.2 UN proper shipping name	
· ADR	1866 RESIN SOLUTION
· IMDG, IATA	RESIN SOLUTION
· 14.3 Transport hazard class(es)	
· ADR, IMDG, IATA	
· Class	3 Flammable liquids.
· 14.4 Packing group	
· ADR, IMDG, IATA	III
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Warning: Flammable liquids.
· EMS Number:	F-E, <u>S-E</u>
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

Transport/Additional information:

ADR

Limited quantities (LQ)

5L

Tunnel restriction code

DIE

Remarks:

ADR 2.2.3.1.5

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15. REGULATORY INFORMATION

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

European regulations

Directive 2004/42/EC 2004/42/IB (b) (250) <250

National regulations:

Information about limitation of use:

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

Other regulations, limitations and prohibitive regulations

Adhere to the Ordinances on the Prohibition of Certain Chemicals.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H361d Suspected of damaging the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure. Route of exposure: Inhalative.

H412 Harmful to aquatic life with long lasting effects.

R10 Flammable.

R20 Harmful by inhalation.

R36/37/38 Irritating to eyes, respiratory system and skin.

R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R63 Possible risk of harm to the unborn child.

R65 Harmful: may cause lung damage if swallowed.

Disclaimer

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 a 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 process, unless specified in the text.

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1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

NORSEKEM SHUTTAFILL – HARDENER Component

Manufacturer/Supplier:

Norsekem Ltd
Unit 6c Stokes Farm
Binfield Road
Wokingham
Berkshire, RG40 5PR
Email: safety@norsekem.co.uk

2. HAZARD IDENTIFICATION

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Org. Perox. EF H242 Heating may cause a fire.



GHS08 health hazard

STOT RE 2 H373 May cause damage to the kidneys through prolonged or repeated exposure.
Route of exposure: Oral.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS02



GHS07



GHS08



GHS09

Signal word

Warning

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Hazard-determining components of labelling:

dibenzoyl peroxide
dibutyl maleate

Hazard statements

H242 Heating may cause a fire.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H373 May cause damage to the kidneys through prolonged or repeated exposure.
Route of exposure: Oral.
H400 Very toxic to aquatic life.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P220 Keep apart from dirt, rust, chemicals, especially reducing substances, acids, alkaline solutions, amines and heavy metal compounds (such as accelerator, dessicative, metal soaps).
P273 Avoid release to the environment.
P234 Keep only in original container.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314 Get medical advice/attention if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P410 Protect from sunlight.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/international regulations.

Other hazards

Flammable.

Risk of fire on contact with combustible substances or other substances effective in promoting the decomposition reaction. Fire propagating effect due to oxygen release. Thermal decomposition with temperatures above 50 °C (SADT) Pls. refer to section 10

Results of PBT and vPvB assessment

PBT: Not applicable.




vPvB: Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS
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Chemical characterisation: Mixtures

Description: Mixture of substances listed below with non hazardous additions.

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· Dangerous components:		
CAS: 94-36-0 EINECS: 202-327-6 Reg.nr.: 01-2119511472-50	dibenzoyl peroxide Org. Perox. B, H241;  Aquatic Acute 1, H400 (M=10); Eye Irrit. 2, H319; Skin Sens. 1, H317	50-100%
CAS: 105-76-0 EINECS: 203-328-4	dibutyl maleate  STOT RE 2, H373;  Skin Sens. 1, H317	

Additional information: For the wording of the listed risk phrases refer to section 16.

4. FIRST AID MEASURES

Description of first aid measures

General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Personal protection for the First Aider.

Take affected persons out of danger area and lay down.

In case of irregular breathing or respiratory arrest provide artificial respiration. Immediately remove any clothing soiled by the product.

After inhalation:

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact:

Immediately wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.

After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing: Do not induce vomiting; call for medical help immediately.

Most important symptoms and effects, both acute and delayed No further relevant information available.

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

In case of fire, the product promotes combustion.

May decompose explosively in absence of fire due to formation of vapour-air-mixture.

Advice for firefighters

Protective equipment:

Wear self-contained apparatus

Do not inhale explosion gases or combustion gases.

Additional information

Remove undamaged containers from the danger zone.

Cool endangered containers with water spray.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Use suitable respiratory protective apparatus in case of insufficient ventilation.

Avoid contact with the eyes and skin.

Keep away from ignition sources.

Pls. refer to section 10

Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:

Collect with an inert, non-combustible, absorbent material (i.e. sand, diatomaceous earth, acid binder, universal binder).

Do not seal container gas tight.

Dispose contaminated material as waste according to item 13.

Pls. refer to section 10

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

7. HANDLING AND STORAGE

Precautions for safe handling

Keep away from heat and direct sunlight.

Keep container tightly sealed.

Resistant to inert materials only.

Suitable materials: Stainless steel (DIN 1.4571), PVC, polyethylene, glass-lined apparatus.

Keep apart from dirt, rust, chemicals, especially reducing substances, acids, alkaline solutions, amines and heavy metal compounds such as accelerator, dessicative, metal soaps). Avoid naked flames, sparks, other ignition sources and sunlight.

Do not mix with accelerators or reducing agents.

Avoid contact with the eyes and skin.

Ensure good ventilation at the workplace.

Do not inhale gases / fumes.

Adhere to the workplace limit values and / or other threshold values.

Avoid release to the environment.

Information about fire - and explosion protection:

Protect from heat.

Keep ignition sources away - Do not smoke.

Avoid naked flames, sparks, other ignition sources and sunlight.

Fumes can combine with air to form an explosive mixture.

Fire propagating effect due to oxygen release.

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Keep apart from incompatible substances, dirt and high temperatures.
Pls. refer to section 10

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and containers

Store in a cool location.
Store only in the original container
Prevent any seepage into the ground.
Adhere to the provisions of the Law on Water Protection.

Information about storage in one common storage facility:

Keep apart from other chemicals, in particular from accelerators.
Store away from food.

Further information about storage conditions:

Store in cool, dry conditions in closed container
Protect from heat and direct sunlight.
Protect from contamination.
Store out of the reach of children.

Maximum storage temperature: +25 °C

Specific end use(s) No further relevant information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical facilities: No further data; see item 7.

Control parameters

Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· DNEs - 94-36-0 dibenzoyl peroxide		
Oral	Long-term exposure - systemic effects	1.65 mg/kg bw/day (general population)
Dermal	Long-term exposure - systemic effects	3.3 mg/kg bw/day (general population)
		6.6 mg/kg bw/day (worker)
Inhalative	Long-term exposure - systemic effects	2.9 mg/m ³ (general population)
		11.75 mg/m ³ (worker)

· PNECs - 94-36-0 dibenzoyl peroxide		
PNEC STP	0.35 mg/l (-)	
PNEC aqua	0.000602 mg/l (freshwater)	
	0.0000602 mg/l (marine water)	
	0.000602 mg/l (intermittent releases)	
PNEC sediment	0.338 mg/kg (freshwater)	
	0.0338 mg/kg (marine water)	
PNEC soil	0.0758 mg/kg (soil dw)	
	6.67 mg/kg (food)	

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Additional information: The lists valid during the making were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Keep away from food. Do not eat, drink, smoke while working.

Avoid contact with the eyes and skin.

After contact with skin, wash immediately with plenty of soap and water.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Use skin protection cream for skin protection.

If skin irritation occurs: Get medical advice/attention.

Respiratory protection:

Adhere to the workplace limit values and / or other threshold values.

Use suitable respiratory protection in case of insufficient ventilation.

In case of brief exposure or low pollution use respiratory filter . In case of intensive or longer exposure use self-contained respiratory protective apparatus. Use Filter A/P2

Protection of hands: Protective gloves

The glove material has to be impermeable and resistant to the product.

Eye Protection: safety Glasses

Body protection: Protective work clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

General Information

Form: Pasty

Colour: White or Red

Odour: Characteristic

Change in condition

Boiling point/Boiling range: Not applicable

Flash point: Not applicable.

Ignition temperature: Not applicable

Decomposition temperature: 50 °C (SADT)

Self-igniting: Pls. refer to section 10

Danger of explosion: Pls. refer to section 10

Density: Not determined.

Solubility in / Miscibility with

water: Not miscible or difficult to mix.

Other information No further relevant information available.

10. STABILITY AND REACTIVITY

Reactivity No decomposition if used and stored according to specifications.

Chemical stability Resistant to inert materials only.

Suitable materials: Stainless steel (DIN 1.4571), PVC, polyethylene, glass-lined apparatus. Thermal decomposition with temperatures above 50 °C (SADT)

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Possibility of hazardous reactions

Thermal decomposition or direct contact with numerous additives, such as reducing agents (i.e. amine accelerator), heavy metal compounds (in particular cobalt accelerators), acids and alkaline solutions, may lead to hazardous, auto accelerating decomposition reactions, and possibly, to explosion or fire.

Conditions to avoid

Avoid naked flames, sparks, other ignition sources and sunlight. Protect from heat.

>25 °C

To avoid thermal decomposition do not overheat.

Incompatible materials:

Keep apart from dirt, rust, chemicals, especially reducing substances, acids, alkaline solutions, amines and heavy metal compounds such as accelerator, dessicative, metal soaps)

Avoid any direct contact with accelerators.

Hazardous decomposition products:

Formation of various organic degradation products and inflammable and explosive vapours/gases upon decomposition.

Danger of forming toxic pyrolysis products.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity:

· LD/LC50 values relevant for classification:		
94-36-0 dibenzoyl peroxide		
Oral	LD 50	>5000 mg/kg (rat)
Inhalative	LC50 /4h	> 24300 mg/m ³ (rat) (Dust)
105-76-0 dibutyl maleate		
Oral	LD50	3730 mg/kg (rat)
Dermal	LD50	10000 mg/kg (rabbit)
Inhalative	LC 50 / 4h	> 5 mg/l (rat)

Primary irritant effect:

on the skin: Repeated exposure may cause skin dryness or cracking.

on the eye: Irritating effect.

· Subacute to chronic toxicity:		
94-36-0 dibenzoyl peroxide		
Oral	NOAEL	500 mg/kg (-) (per day, 29d)

Additional toxicological information: No further relevant information available.

Sensitisation May cause sensitisation by skin contact.

CMR effects (carcinogenity, mutagenicity and toxicity for reproduction) No further relevant information available.

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12. ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity:	
94-36-0 dibenzoyl peroxide	
EC50	35 mg/l (activated sludge)
EC50/48h	0.11 mg/l (daphnia magna)
EC50/72h	0.06 mg/l (Pseudokirchneriella subcapitata)
LC50/96h	0.06 mg/l (oncorhynchus mykiss)
105-76-0 dibutyl maleate	
EC10	1003 mg/l (pseudomonas putida) (6h)
EC50/48h	21.0 mg/l (daphnia magna)
EC50/72h	6.2 mg/l (scenedesmus subspicatus)
LC50	1.2 mg/l (oncorhynchus mykiss) (48h)
Persistence and degradability	
105-76-0 dibutyl maleate	
Biodegradation	95 % (activated sludge) (19 days)
Bioaccumulative potential	
94-36-0 dibenzoyl peroxide	
BCF	66.6 (-)
log Pow	3.2 (-) (OECD 117)
105-76-0 dibutyl maleate	
log Pow	3.38 (-)

Behaviour in environmental systems

Mobility in soil	
94-36-0 dibenzoyl peroxide	
Koc	3.8 (-) (22 °C)

Additional ecological information:

General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects No further relevant information available.

13. DISPOSAL CONSIDERATION

Waste treatment methods

Recommendation

Must not be disposed together with household waste. Do not allow product to reach sewage system.

Disposal must be made according to official regulations.

Dilute product with suitable inert liquid to a peroxide concentration below 10% and subsequently dispose of according to the refuse disposal act.

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Waste disposal key:

The waste codes given above are to be considered recommendations; because of regional and industrial sector specific features, application of different waste codes is possible.

<i>European waste catalogue</i>	
16 05 06*	<i>laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals</i>

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

UN-Number

ADR, IMDG, IATA 3108

UN proper shipping name

ADR 3108 ORGANIC PEROXIDE TYPE E, SOLID (dibenzoyl peroxide), ENVIRONMENTALLY HAZARDOUS

IMDG, IATA ORGANIC PEROXIDE TYPE E, SOLID (dibenzoyl Peroxide)

Transport hazard class(es)

ADR



Class 5.2 Organic peroxides.

Label 5.2

IMDG, IATA



Class 5.2 Organic peroxides.

Label 5.2

Packing group

ADR, IMDG, IATA Void

Environmental hazards:

Special marking (ADR): Symbol (fish and tree)

Special precautions for user Warning: Organic peroxides.

EMS Number: F-J,S-R

Transport in bulk according to

Annx II of MARPOL73/78 and the IBC Code Not applicable.

Transport/additional information

ADR

Tunnel restriction code D

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15. REGULATORY INFORMATION

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

National regulations:

Information about limitation of use:

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

- | | |
|------|--|
| H241 | Heating may cause a fire or explosion. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H373 | May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral. |
| H400 | Very toxic to aquatic life. |

Disclaimer

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 a 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 process, unless specified in the text.

July 2015