

1. Product and company identification

Product identifier

Trade name: Airfill 2 Cream Hardener

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

General use: Curing agent.
Reserved for industrial and professional use.

Details of the supplier of the safety data sheet

Company name:

Airtech International, Inc.
5700 Skylab Road
Huntington Beach, CA 92647
E-mail: airtech@airtechintl.com
Website: www.airtechonline.com
Telephone: +1 714.899.8100
Dept. responsible for information:
Telephone: +1 714.899.8100
E-mail: airtech@airtechintl.com

Airtech Europe Sarl
Zone industrielle Haneboesch
L-4562 Differdange
Luxembourg
Website: www.airtech.lu
Telephone: +352 582.282
Dept. responsible for information:
Telephone: +352 582.282
E-mail: sales@airtech.lu

Tygavac Advanced Materials Ltd.
The Causeway
Broadway Business Park
Chadderton, Oldham
OL9 9XD United Kingdom
Website: www.tygavac.co.uk
Telephone: +44 161.947.1610
Dept. responsible for information:
Telephone: +44 161.947.1610
E-mail: sales@tygavac.co.uk

Airtech Asia Ltd.
No. 161 of Anyuan Rd
Chagugang County
Wuqing District
301721, Tianjin, P.R. China
Website: www.airtech.asia
Telephone: +86 22 8862 9800
Telefax: +86 22 8862 9900
Dept. responsible for information:
Telephone: +86 22 8862 9800
E-mail: airtech.asia@airtechasia.com.cn

Emergency phone number

CHEMTREC EMERGENCY PHONE:
Within USA/Canada: 1-(800)424-9300
International: +1 703-741-5970

2. Hazards identification

Emergency overview

Appearance: Physical state at 68 °F and 101.3 kPa: solid
Form: paste
Color: white, red, black or blue

Odor: weak

Classification: Organic Peroxide - Category E; Eye Irritation - Category 2A; Sensitization - skin - Category 1; Aquatic toxicity - acute - Category 1; Aquatic toxicity - chronic - Category 1;

Hazard symbols:



Signal word: **Warning**

Hazard statements: Heating may cause a fire.
May cause an allergic skin reaction.
Causes serious eye irritation.
Very toxic to aquatic life with long lasting effects.

Precautionary statements: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep only in original container.
Keep cool.
Ground/bond container and receiving equipment.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Wash hands and face thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection.
IF ON SKIN: Wash with plenty of water/soap.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see ' First aid ' on this label).
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
In case of fire: Use ... to extinguish.
Collect spillage.
Store in a well-ventilated place.
Protect from sunlight.
Store at temperatures not exceeding 32 °C/77 °F.
Store separately.
Dispose of contents/container to hazardous or special waste collection point.

Regulatory status

This material is considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and SIMDUT in Canada.

Hazards not otherwise classified

Hazardous, self-accelerating decomposition reaction is possible. Under certain conditions an explosion or fire may occur as a result of direct contact with incompatible substances or through thermal decomposition.

see section 11: Toxicological information

3. Composition / Information on ingredients

Chemical characterization:

Mixture of the substances listed below with non-hazardous additions

Relevant ingredients:

CAS No.	Designation	Content	Classification
CAS 94-36-0	Dibenzoyl peroxide	40 - 50 %	Organic Peroxide - Category B. Eye Irritation - Category 2A. Sensitization - skin - Category 1. Aquatic toxicity - acute - Category 1. Aquatic toxicity - chronic - Category 1.
CAS 131298-44-7	Benzoic acid, C9-11-branched alkyl esters	10 - 25 %	Acute Toxicity - inhalative - Category 4.
CAS 557-05-1	Zinc distearate	5 - 10 %	Aquatic toxicity - acute - Category 1.

4. First aid measures

General information:	In case of accident or if you feel unwell, seek medical advice immediately. Seek medical assistance when anyone has symptoms apparently due to inhalation, swallowing or contact with skin or eyes.
In case of inhalation:	Move victim to fresh air. Seek medical treatment in case of troubles.
Following skin contact:	After contact with skin, wash immediately with soap and plenty of water. Take off contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.
After eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently consult an ophthalmologist.
After swallowing:	Never give anything by mouth to an unconscious person. Rinse mouth. Do not induce vomiting without medical assistance. Seek medical attention.

Most important symptoms/effects, acute and delayed

May cause an allergic skin reaction. Causes serious eye irritation.

Information to physician

Treat symptomatically.

5. Fire fighting measures

Flash point/flash point range:	201.2 °F (c.c.)
Auto-ignition temperature:	No data available
Suitable extinguishing media:	Water spray jet, alcohol resistant foam, dry chemical powder and carbon dioxide
Extinguishing media which must not be used for safety reasons:	Full water jet

Specific hazards arising from the chemical

Heating may cause a fire. Harmful and/or toxic vapors may be produced in the event of thermal decomposition.

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

Protective equipment and precautions for firefighters:

Wear self-contained positive pressure breathing apparatus and full firefighting protective clothing.

Additional information: Cool endangered containers with water spray and, if possible, remove from danger zone. In case of fire and/or explosion do not breathe fumes. Use a water fog to control vapors. Do not allow fire water to penetrate into surface or ground water. Product enhances combustion. Prevent subsequent re-ignition with abundant quantities of water.

6. Accidental release measures

Personal precautions: Eliminate all ignition sources if safe to do so. Avoid contact with skin, eyes, and clothing. Do not inhale substance. Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse.
Keep unprotected people away. Ensure adequate ventilation, especially in confined areas.

Environmental precautions: Do not allow to penetrate into soil, waterbodies or drains.
If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

Methods for clean-up: Plug leak if safely possible. Take up with non-flammable, liquid binding material (e.g. sand/earth/diatomaceous earth/vermiculit) and perform disposal according to instructions. Thoroughly clean the contaminated area with water. Dispose of waste according to applicable legislation.

Additional information: Use explosion-proof equipment and non-sparking tools/utensils.

7. Handling and storage

Handling

Advices on safe handling: Avoid formation of flammable and explosive vapour concentrations in the air and exceeding the exposure limit values. Provide adequate ventilation, and local exhaust as needed. Avoid breathing dust/fume/mist. Avoid contact with skin, eyes, and clothing. Do not inhale substance. Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse. Do not weigh in storerooms. Do not mix with peroxide activators and reducing agents. During the processing the peroxide and the accelerator have to be weight out separately and added. Avoid shock and friction. Use shoes with conductive sole. When using do not eat, drink or smoke. Work place should be equipped with a shower and an eye rinsing apparatus.

Precautions against fire and explosion:

Take standard precautions to prevent fire. Keep away from sources of ignition. Use only explosion-proof equipment. Take precautionary measures against static discharges.

Storage

Requirements for storerooms and containers:

Keep container tightly closed in a cool, well-ventilated place. Keep only in the original container. Protect from heat and direct sunlight.
Store carefully closed containers upright to prevent any leaks. Do not drop, drag or bang the container.

Recommended storage temperature: <25 °C/77 °F

Only trained personnel may be allowed to enter storage area.

Hints on joint storage: Do not store together with: strong oxidizing agents, acids.

8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
94-36-0	Dibenzoyl peroxide	USA: ACGIH: TWA	5 mg/m ³
		USA: NIOSH: TWA	5 mg/m ³
		USA: OSHA: TWA	5 mg/m ³
557-05-1	Zinc distearate	USA: NIOSH: TWA	10 mg/m ³ inhalable fraction
		USA: NIOSH: TWA	5 mg/m ³ (respirable fraction)
		USA: OSHA: TWA	15 mg/m ³ (inhalable fraction)
		USA: OSHA: TWA	5 mg/m ³ (respirable fraction)

Engineering controls

Provide adequate ventilation, and local exhaust as needed. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation. Use only explosion-proof equipment. Avoid shock and friction.

See also information in chapter 7, section storage.

Personal protection equipment (PPE)

Eye/face protection	Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.
Skin protection	Wear closed work clothing. Use shoes with conductive sole.
	Protective gloves according to OSHA Standard - 29 CFR: 1910.138. Chemically resistant gloves.
	Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
Respiratory protection:	Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded.
General hygiene considerations:	Avoid breathing dust/fume/mist. Avoid contact with skin, eyes, and clothing. Take off contaminated clothing and wash it before reuse. Do not inhale substance. Work place should be equipped with a shower and an eye rinsing apparatus. Wash hands before breaks and after work. Keep away from sources of ignition. When using do not eat, drink or smoke. Keep away from food and drinks.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance:	Physical state at 68 °F and 101.3 kPa: solid Form: paste Color: white, red, black or blue
Odor:	weak
Odor threshold:	No data available
pH value:	not applicable
Melting point/freezing point:	not determined
Initial boiling point and boiling range:	122 °F (Dibenzoyl peroxide)
Flash point/flash point range:	201.2 °F (c.c.)
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	No data available
Vapor pressure:	No data available

Vapor density:	No data available
Density:	1.2 g/cm ³
Solubility:	No data available
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Thermal decomposition:	122 °F (SADT)
Additional information:	No data available

10. Stability and reactivity

Reactivity:	From 122 °F: Danger of a hazardous self-accelerating decomposing reaction. Heating may cause a fire. Can explode if overheated.
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions	Hazardous, self-accelerating decomposition reaction is possible. Under certain conditions an explosion or fire may occur as a result of direct contact with incompatible substances or through thermal decomposition. Critical temperature approx. 122 °F
Conditions to avoid:	Protect from heat and direct sunlight. Avoid shock and friction. Keep away from sources of ignition. Avoid the formation of aerosol/vapors.
Incompatible materials:	Strong oxidizing agents, acids
Hazardous decomposition products:	Carbon monoxide and carbon dioxide.
Thermal decomposition:	122 °F (SADT)

11. Toxicological information

Toxicological tests

Toxicological effects:	The statements are derived from the properties of the single components. No toxicological data is available for the product as such. Acute toxicity (oral): Lack of data. Acute toxicity (dermal): Lack of data. Acute toxicity (inhalative): Lack of data. Skin corrosion/irritation: Lack of data. Serious eye damage/irritation: Eye Irritation - Category 2A = Causes serious eye irritation. Sensitisation to the respiratory tract: Lack of data. Skin sensitisation: Sensitization - skin - Category 1 = May cause an allergic skin reaction. Germ cell mutagenicity/Genotoxicity: Lack of data. Carcinogenicity: Lack of data. Reproductive toxicity: Lack of data. Effects on or via lactation: Lack of data. Specific target organ toxicity (single exposure): Lack of data. Specific target organ toxicity (repeated exposure): Lack of data. Aspiration hazard: Lack of data.
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Other information: Information about dibenzoyl peroxide:
LD50 Rat, oral: 6400-7710 mg/kg

Symptoms

In case of inhalation:
Harmful and/or toxic vapors may be produced in the event of thermal decomposition. Fatal if inhaled.
In case of ingestion: May be harmful if swallowed.
Following symptoms can occur depending on degree of seriousness: gastrointestinal complaints, nausea, vomiting, diarrhea.
After contact with skin: Danger of cutaneous absorption.
Following symptoms can occur depending on degree of seriousness: Irritation, redness, pain, sensitising.
After eye contact: Irritation, redness, pain.

12. Ecological information

Ecotoxicity

Further details: No data available

Mobility in soil

No data available

Persistence and degradability

Further details: No data available

Additional ecological information

Volatile organic compounds (VOC):

0 % by weight

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

13. Disposal considerations

Product

Recommendation: Incinerate as hazardous waste according to applicable local, state, and federal regulations.

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation. Handle contaminated packages in the same way as the substance itself. Non-contaminated packages may be recycled. Do not remove label until container is thoroughly cleaned.

Airfill 2 Cream Hardener

Material number 1077

Page:

8 of 9

14. Transport information**USA: Department of Transportation (DOT)**

Identification number: UN3108
Proper shipping name: UN 3108, ORGANIC PEROXIDE TYPE E, SOLID (Dibenzoyl peroxide)
Hazard class or Division: 5.2
Labels: 5.2
Symbols: G
Packaging – Exceptions: 152
Packaging – Non-bulk: 225
Packaging – Bulk: None
Quantity limitations – Passenger aircraft / rail: 10 kg
Quantity limitations – Cargo only: 25 kg
Vessel stowage – Location: D
Vessel stowage – Other: 12, 25, 52, 53
Remarks: The following must be typed on Dangerous Goods paperwork:
THE PACKAGE CONTAINING UN 3108 MUST BE SHADED FROM DIRECT SUNLIGHT, STORED AWAY FROM ALL SOURCES OF HEAT, IN A WELL VENTILATED AREA.

**Sea transport (IMDG)**

UN number: UN 3108
Proper shipping name: UN 3108, ORGANIC PEROXIDE TYPE E, SOLID (Dibenzoyl peroxide)
Class or division, Subsidiary risk: Class 5.2, Subrisk -
Packing Group: -
EmS: F-J, S-R
Special provisions: 122, 274
Limited quantities: 500 g
Excepted quantities: E0
Contaminated packaging - Instructions: P520
Contaminated packaging - Provisions: -
IBC - Instructions: -
IBC - Provisions: -
Tank instructions - IMO: -
Tank instructions - UN: -
Tank instructions - Provisions: -
Stowage and handling: Category D. SW1
Segregation: SG35 SG36 SG72
Properties and observations: Decomposes at elevated temperatures or in a fire. Burns vigorously. Insoluble in water. Contact with the eyes and skin should be avoided. May evolve irritant or toxic fumes.
Marine pollutant: yes
Segregation group: none

Air transport (IATA)

UN/ID number: UN 3108
Proper shipping name: UN 3108, ORGANIC PEROXIDE TYPE E, SOLID (Dibenzoyl peroxide)
Class or division, Subsidiary risk: Class 5.2
Hazard label: Organic peroxide
Excepted Quantity Code: E0
Passenger and Cargo Aircraft: Ltd.Qty.: Forbidden
Passenger and Cargo Aircraft: Pack.Instr. 570 - Max. Net Qty/Pkg. 10 kg
Cargo Aircraft only: Pack.Instr. 570 - Max. Net Qty/Pkg. 25 kg
Special provisions: A20 A802
Emergency Response Guide-Code (ERG): 5L

15. Regulatory information

National regulations - U.S. Federal Regulations

Product: All ingredients of this product are listed on the TSCA inventory.

Dibenzoyl peroxide: Carcinogen Status:
IARC Rating: Group 3
OSHA Carcinogen: not listed
NTP Rating: not listed
Other Environmental Laws:
SARA Title III Section 313, Toxic Release: Conc. 1.0% / Threshold Standard
NIOSH Recommendations:
Occupational Health Guideline: 0052
OSHA Process Safety Management: Threshold 7500 lbs.

Zinc distearate: NIOSH Recommendations:
Occupational Health Guideline: 0676

National regulations - Great Britain

Hazchem-Code: 1W

16. Other information

Text for labeling: Contains 40 - 50 % Dibenzoyl peroxide, 10 - 25 % Benzoic acid, C9-11-branched alkyl esters, 5 - 10 % Zinc distearate. Safety data sheet available on request.

Hazard rating systems:



NFPA Hazard Rating:
Health: 2 (Moderate)
Fire: 2 (Moderate)
Reactivity: 2 (Moderate)

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

HEALTH	2
FLAMMABILITY	2
PHYSICAL HAZARD	2
	X

Reason of change: Changes in section 14: Transport information, danger releasing substance

Department issuing data sheet

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

This data sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, and which additional precautions may be necessary. All health and safety information contained in this data sheet should be provided to your employees and customers. It is your responsibility to develop appropriate workplace instructions and training programs for employees.

As the conditions and methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this product. The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. All statements or suggestions are made without warranty, expressed or implied, regarding accuracy of information, the hazards connected with the use of the product or the results to be obtained from the use thereof.

1. Product and company identification

Product identifier

Trade name: Airfill 2 Filler Paste

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

General use: Filling compound.
Reserved for industrial and professional use.

Details of the supplier of the safety data sheet

Company name:

Airtech International, Inc.
5700 Skylab Road
Huntington Beach, CA 92647
E-mail: airtech@airtechintl.com
Website: www.airtechonline.com
Telephone: +1 714.899.8100
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Chadderton, Oldham
OL9 9XD United Kingdom
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Airtech Asia Ltd.
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Chagugang County
Wuqing District
301721, Tianjin, P.R. China
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Telephone: +86 22 8862 9800
Telefax: +86 22 8862 9900
Dept. responsible for information:
Telephone: +86 22 8862 9800
E-mail: airtech.asia@airtechasia.com.cn

Emergency phone number

CHEMTREC EMERGENCY PHONE:
Within USA/Canada: 1-(800)424-9300
International: +1 703-741-5970

2. Hazards identification

Emergency overview

Appearance: Physical state at 68 °F and 101.3 kPa: solid
Form: Paste (viscous, semi-solid)
Color: varying colors

Odor: like styrene

Classification: Acute Toxicity - inhalative - Category 4; Skin Irritation - Category 2; Eye Irritation - Category 2A; Reproductive toxicant - Category 2;
Specific Target Organ Toxicity (Single Exposure) - Category 3;
Specific Target Organ Toxicity (Repeated Exposure) - Category 1;

Hazard symbols:



Signal word:

Danger

Hazard statements:

Causes skin irritation.
Causes serious eye irritation.
Harmful if inhaled.
May cause respiratory irritation.
Suspected of damaging the unborn child.
Causes damage to organs through prolonged or repeated exposure.

Precautionary statements:

Obtain special instructions before use.
Do not breathe fume/gas/mist/vapors/spray.
Wash hands and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection.
IF ON SKIN: Wash with plenty of water/soap.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/attention.
Call a POISON CENTER/doctor if you feel unwell.
Specific treatment (see ' First aid ' on this label).
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container to hazardous or special waste collection point.

Regulatory status

This material is considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and SIMDUT in Canada.

Hazards not otherwise classified

see section 11: Toxicological information

3. Composition / Information on ingredients

Chemical characterization:

Contains <26% polyester (polymer) .

Relevant ingredients:

CAS No.	Designation	Content	Classification
CAS 100-42-5	Styrene	< 20 %	Flammable Liquid - Category 3. Acute Toxicity - inhalative - Category 4. Skin Irritation - Category 2. Eye Irritation - Category 2A. Reproductive toxicant - Category 2. Specific Target Organ Toxicity (Single Exposure) - Category 3. Specific Target Organ Toxicity (Repeated Exposure) - Category 1. Aspiration Toxicity - Category 1. Aquatic toxicity - chronic - Category 3.
CAS 25013-15-4	Vinyltoluene	< 10 %	Flammable Liquid - Category 3. Acute Toxicity - inhalative - Category 4. Skin Irritation - Category 2. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Single Exposure) - Category 3. Aspiration Toxicity - Category 1.
CAS 14808-60-7	Quartz (SiO ₂)	< 1 %	Carcinogenicity - Category 2. Specific Target Organ Toxicity (Repeated Exposure) - Category 2.

Additional information: Contains Talcum, Limestone, silicon dioxide, fiberglass, carbon.
The maximum workplace exposure limits are, where necessary, listed in section 8.

4. First aid measures

General information: First aider: Pay attention to self-protection!

In case of inhalation: Move victim to fresh air, put at rest and loosen restrictive clothing. Do not allow victim to become chilled. Keep victim warm. Keep airway open. If breathing has stopped, give artificial respiration immediately. In case of breathing difficulties administer oxygen. Seek medical attention.

Following skin contact: After contact with skin, wash immediately with soap and plenty of water. Change contaminated clothing. Seek medical treatment in case of troubles.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently consult an ophthalmologist.

After swallowing: Immediately call a doctor. Do not induce vomiting without medical assistance. Rinse mouth with water. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed

Harmful if inhaled. Causes skin irritation. Causes serious eye irritation., May cause respiratory irritation.

Information to physician

Treat symptomatically.

5. Fire fighting measures

Flash point/flash point range:

87.8 - 127.4 °F (c.c.)

Auto-ignition temperature:

not determined

Suitable extinguishing media:

Dry chemical powder, foam, carbon dioxide, water spray jet

Extinguishing media which must not be used for safety reasons:

Full water jet.

Specific hazards arising from the chemical

Product is non-combustible. Harmful and/or toxic vapors may be produced in the event of thermal decomposition. In case of fire may be liberated: nitrogen oxides (NO_x), carbon monoxide and carbon dioxide.

Protective equipment and precautions for firefighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information:

Seal off endangered area. Heating causes rise in pressure with risk of bursting. Cool endangered containers with water spray and, if possible, remove from danger zone. Fight fire from a safe distance. Stay upwind/keep distance from source.

6. Accidental release measures

Personal precautions:

Avoid the formation of aerosol/vapors. Avoid contact with skin and eyes. Do not breathe vapor or spray. Wear appropriate protective equipment. Keep unprotected people away. Ensure adequate ventilation, especially in confined areas.

Environmental precautions:

Do not allow to enter drains, surface waters, basements or pits. If necessary notify appropriate authorities.

Methods for clean-up:

Provide adequate ventilation. Plug leak if safely possible. Soak up with absorbent materials such as sand, siliceous earth, acid- or universal binder. Store in special closed containers and dispose of according to ordinance.

7. Handling and storage

Handling

Advices on safe handling: Handle in accordance with good industrial hygiene and safety practice. Obtain special instructions before use. Provide adequate ventilation, and local exhaust as needed. Avoid contact with skin, eyes, and clothing. Avoid the formation of aerosol/vapors. Do not breathe vapor or spray. Wear appropriate protective equipment. When using do not eat, drink or smoke. Wash hands before breaks and after work.

Precautions against fire and explosion:

Take standard precautions to prevent fire. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Use only non-sparking tools.

Storage

Requirements for storerooms and containers:

Storage temperature: < 100.4 °F. Keep only in the original container. Keep container tightly closed in a cool, well-ventilated place. Store in a dry place. Do not drop, drag or bang the container. Protect from frost. Protect against direct sunlight. Keep away from incompatible materials.

Hints on joint storage:

Incompatible materials: Strong oxidizing agents, acids, metals, polymerization initiator. Keep away from food and drinks.

8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
14807-96-6	Talcum	USA: ACGIH: TWA USA: NIOSH: TWA USA: OSHA: TWA	2 mg/m ³ respirable fraction 2 mg/m ³ 20 mppcf Containing less than 1% quartz
1317-65-3	Limestone	USA: NIOSH: TWA USA: NIOSH: TWA USA: OSHA: TWA USA: OSHA: TWA	10 mg/m ³ inhalable fraction 5 mg/m ³ (respirable fraction) 15 mg/m ³ inhalable fraction 5 mg/m ³ (respirable fraction)
100-42-5	Styrene	OSHA: Ceiling USA: ACGIH: STEL USA: ACGIH: TWA USA: NIOSH: STEL USA: NIOSH: TWA USA: OSHA: TWA	200 ppm (Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift: 600 ppm 5 mins. in any 3 hrs.) 170 mg/m ³ ; 40 ppm 85 mg/m ³ ; 20 ppm 425 mg/m ³ ; 100 ppm 215 mg/m ³ ; 50 ppm 100 ppm (Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift: 600 ppm 5 mins. in any 3 hrs.)
25013-15-4	Vinyltoluene	USA: ACGIH: STEL USA: ACGIH: TWA USA: NIOSH: TWA USA: OSHA: TWA	483 mg/m ³ ; 100 ppm 242 mg/m ³ ; 50 ppm 480 mg/m ³ ; 100 ppm 480 mg/m ³ ; 100 ppm
65997-17-3	Glass fibers	USA: ACGIH: TWA USA: ACGIH: TWA USA: NIOSH: TWA USA: NIOSH: TWA	1 fibers/cm ³ (Synthetic vitreous fibres, Continuous filament glass fibres) 5 mg/m ³ (Synthetic vitreous fibres, Continuous filament glass fibres, inhalable fraction) 3 fibers/cm ³ Fibers less than or equal to 3,5 µm in diameter and greater than or equal to 10µm in length. 5 mg/m ³ (Fiber glas®, Fiberglass, Glass fibers, Glass wool, total dust)
1333-86-4	Carbon	USA: ACGIH: TWA USA: NIOSH: TWA USA: NIOSH: TWA USA: OSHA: TWA	3 mg/m ³ (inhalable fraction) 0.1 mg PAHs/m ³ (Carbon black in presence of polycyclic aromatic hydrocarbons (PAHs)) 3.5 mg/m ³ 3.5 mg/m ³
14808-60-7	Quartz (SiO ₂)	USA: ACGIH: TWA USA: NIOSH: TWA USA: OSHA: TWA USA: OSHA: TWA USA: OSHA: TWA	0.025 mg/m ³ (respirable fraction) 0.05 mg/m ³ (respirable fraction) 10 mg/m ³ /% SiO ₂ + 2 (respirable fraction) 250 mppcf/%SiO ₂ +5 (fine dust) 30 mg/m ³ /% SiO ₂ + 2 (inhalable fraction)

Biological limit values:

CAS No.	Designation	Type	Limit value	Parameter	Sampling
100-42-5	Styrene	USA: ACGIH-BEI, urine	40 µg/L	Styrene in urine	end of exposure or end of shift
		USA: ACGIH-BEI, urine	400 mg/g creatinine	Mandelic acid + Phenylglyoxylic acid	end of exposure or end of shift

Engineering controls

Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation.

See also information in chapter 7, section storage.

Personal protection equipment (PPE)

Eye/face protection: Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.

Skin protection: Wear suitable protective clothing.

Protective gloves according to OSHA Standard - 29 CFR: 1910.138.

Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Respiratory protection: Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded. Use combination filter type A/P according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.

General hygiene considerations:

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes, and clothing.

Change contaminated clothing. Wash contaminated clothing prior to re-use. Have eye wash bottle or eye rinse ready at work place. Wash hands before breaks and after work. When using do not eat, drink or smoke.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance: Physical state at 68 °F and 101.3 kPa: solid
Form: Paste (viscous, semi-solid)
Color: varying colors

Odor: like styrene
Odor threshold: 0.16 ppm (Styrene)

pH value: not applicable

Melting point/freezing point: No data available

Initial boiling point and boiling range: > 293 °F (Polyester)

Flash point/flash point range: 87.8 - 127.4 °F (c.c.)

Evaporation rate: ≤ 1 (Styrene)

Flammability: Burning rate test: Not fulfilling criteria for hazard class "Flammable Solids".

Explosion limits: LEL (Lower Explosion Limit): 1.10 Vol-%

UEL (Upper Explosive Limit): 6.10 Vol-%

Vapor pressure: at 68 °F: 5.7 hPa (Styrene)

Vapor density: 3.6 (Styrene)

Density: 1.52 - 1.57 g/cm³

Water solubility: insoluble

Airfill 2 Filler Paste

Material number 1036

Page:

7 of 13

Partition coefficient: n-octanol/water:	2.95 log P(o/w) (Styrene) Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected.
Auto-ignition temperature:	not determined
Thermal decomposition:	not determined
Viscosity, dynamic:	not determined
Viscosity, kinematic:	not determined
Explosive properties:	not determined
Oxidizing characteristics:	not determined
Ignition temperature:	914 °F (Styrene)

10. Stability and reactivity

Reactivity:	Refer to section: Possibility of hazardous reactions.
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions	Hazardous polymerization can occur under certain conditions, including increased temperature, low inhibitor concentration and low oxygen. Polymerization along with heat production.
Conditions to avoid:	Keep away from heat. Avoid the formation of aerosol/vapors. Protect against direct sunlight.
Incompatible materials:	Oxidising agent, acids, alkalis
Thermal decomposition:	not determined

11. Toxicological information

Toxicological tests

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Based on available data, the classification criteria are not met.

ATEmix calculated: 2750.6 mg/L

Acute toxicity (dermal): Lack of data.

Acute toxicity (inhalative): Acute Toxicity - inhalative -

Category 4 = Harmful if inhaled. ATEmix calculated: 3838.7 ppm (Gas); 16.35 mg/L (Vapors)

Skin corrosion/irritation: Skin Irritation - Category 2 = Causes skin irritation.

Serious eye damage/irritation: Eye Irritation -

Category 2A = Causes serious eye irritation.

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Lack of data.

Germ cell mutagenicity/Genotoxicity: Lack of data.

Carcinogenicity: Lack of data.

Reproductive toxicity: Reproductive toxicant -

Category 2 = Suspected of damaging the unborn child.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Specific Target Organ Toxicity (Single Exposure) - Category 3 = May cause respiratory irritation.

Specific target organ toxicity (repeated exposure): Specific Target Organ Toxicity (Repeated Exposure) -

Category 1 = Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard: Lack of data.

Other information: Information about styrene:

LD50 Rat (oral): 2650 mg/kg/bw

LD50 Rat (dermal): >2000 mg/kg/bw

LD50 Rat (inhalative): 11.8 mg/L/4 h

Affects the central nervous system, possible disturbances from: 50 mL/m³.

For carcinogenic effects:

IARC Rating: Group 2B

OSHA Carcinogen: not listed

NTP Rating: not listed

Information about Silicon dioxide:

LD50 Rat (oral): 3160 mg/kg/bw

Information about Talcum:

For carcinogenic effects:

IARC Rating: Group 2B

OSHA Carcinogen: not listed

NTP Rating: not listed

Information about Quartz (SiO₂):

For carcinogenic effects:

ACHIH: A2 - suspected human carcinogens

NIOSH: potential occupational carcinogen

NTP: known human carcinogens

IARC: group 1

Symptoms

In case of inhalation:

Inhaling can lead to irritations of the respiratory tract and mucous membrane. Higher doses may lead to a narcotic effect.

Following symptoms can occur depending on degree of seriousness: Dizziness, headache, nausea, confusion

In case of ingestion:

May be harmful if swallowed. Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

After contact with skin: Redness, irritation, pain

After eye contact: Redness, irritation, pain

12. Ecological information

Ecotoxicity

Aquatic toxicity:

Information about Styrene:

EC50 Selenastrum capricarnotum: 4.9 mg/L/72h.

Daphnia toxicity:

EC50 Daphnia magna (Big water flea): 4.7 mg/L/48h.

NOEC Daphnia magna (Big water flea): 1.01 mg/L/21d.

Fish toxicity:

LC50 Pimephales promelas (fathead minnow): 4.02 mg/L/96h.

Mobility in soil

No data available

Persistence and degradability

Further details:

Information about Styrene:

Biodegradation:

71 %/ 28 d (BOD/ThOD / ISO 9408). Readily biodegradable.

100 %/14 d (OECD 302 C). Inherently biodegradable.

Additional ecological information

Volatile organic compounds (VOC):

24 % by weight = 341 g/L

General information:

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

13. Disposal considerations

Product

Recommendation: Dispose of as hazardous waste. Dispose of waste according to applicable legislation.

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation. Handle contaminated packages in the same way as the substance itself. Non-contaminated packages may be recycled. Do not remove label until container is thoroughly cleaned.

Additional information

California Hazardous Waste Status

Information about Styrene (CAS 100-42-5): Toxic, Ignitable

14. Transport information

USA: Department of Transportation (DOT)

Proper shipping name: Not restricted

Sea transport (IMDG)

Proper shipping name: Not restricted

Marine pollutant: no

Air transport (IATA)

Proper shipping name: Not restricted

Further information

No dangerous good in sense of these transport regulations.

15. Regulatory information

National regulations - U.S. Federal Regulations

Talcum:	TSCA Inventory: listed TSCA HPVC: not listed Carcinogen Status: IARC Rating: Group 3 OSHA Carcinogen: not listed NTP Rating: not listed NIOSH Recommendations: Occupational Health Guideline: 0584
Limestone:	TSCA Inventory: listed; UVCB TSCA HPVC: not listed NIOSH Recommendations: Occupational Health Guideline: 0090*
Styrene:	TSCA Inventory: listed TSCA HPVC: not listed Carcinogen Status: IARC Rating: Group 2B OSHA Carcinogen: not listed NTP Rating: listed Clean Air Act: Hazardous Air Pollutants: Code XOV SOCMI Chemical: yes Clean Water Act: Hazardous Substances: RQ 1000 lbs. Other Environmental Laws: CERCLA: RQ 1000 lbs. RCRA Groundwater Monitoring: Methods 8020, 8240 / PQL 1, 5 SARA Title III Section 313, Toxic Release: Conc. 0.1% / Threshold Standard NIOSH Recommendations: Occupational Health Guideline: 0571
Silicon dioxide:	TSCA Inventory: not listed
Glass fibers:	TSCA Inventory: listed; UVCB TSCA HPVC: not listed
Carbon:	TSCA Inventory: listed; UVCB; EPA flags XU TSCA HPVC: not listed Carcinogen Status: IARC Rating: Group 2B OSHA Carcinogen: not listed NTP Rating: not listed NIOSH Recommendations: Occupational Health Guideline: 0102
Quartz (SiO ₂):	TSCA Inventory: listed TSCA HPVC: not listed Carcinogen Status: IARC Rating: Group 1 OSHA Carcinogen: not listed NTP Rating: listed NIOSH Recommendations: Occupational Health Guideline: 0553

National regulations - U.S. State Regulations

Talcum: California Proposition 65 code: not listed
 Massachusetts Haz. Substance codes: 2,4 F5
 Minnesota Haz. Substance:
 Codes: AO - Ratings: --
 Pennsylvania Haz. Substance code: -
 Washington Air Contaminant:
 TWA: 2mg
 Wisconsin Hazardous Air Contaminant List (Appears on Table): A

Styrene: Delaware Air Quality Management List:
 DRQ: 1000 - RQ State: Federal Regulations Apply
 Idaho Air Pollutant List:
 Title 585 -- AAC: 1 -- EL: 6.67 -- WEL: - Title 586 -
 Maine Hazardous Air Pollutants:
 Me 2005: HAP - Hap Rpt: 2000
 Massachusetts Haz. Substance codes: 1,2,4,5,6,9 *E*C* F7 F8
 Michigan Critical Material:
 Note: 2 - CMR#: 27 - Parameter#: 00100-42-5 - Annual Usage Parameter: 100
 Minnesota Haz. Substance:
 Codes: ANO -- Ratings: 9.63 -- Status: Air Pollutant. Carcinogen. Title III. TRI.
 New Jersey RTK Hazardous Substance:
 DOT 2055 - Sub No.: 1748 - TPQ: -
 New York List of Hazardous Substances:
 RQ -- Air: 1000 - RQ -- Land: 1 - Note: No Note Associated with this chemical.
 Pennsylvania Haz. Substance code: E
 Washington Air Contaminant:
 TWA: 50 ppm / 215 mg -- STEL: 100 ppm / 425 mg
 California Proposition 65: cancer
 Rhode Island HSL: listed

Carbon: California Proposition 65: cancer
 Rhode Island HSL: listed

Quartz (SiO2): California Proposition 65: cancer
 Rhode Island HSL: listed

National regulations - Great Britain

Hazchem-Code: -

16. Other information

Text for labeling: Contains < 20 % Styrene, < 10 % Vinyltoluene, < 1 % Quartz (SiO2). Safety data sheet available on request.

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



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

HEALTH	*	2
FLAMMABILITY		0
PHYSICAL HAZARD		1
		X

Reason of change: Changes in section 1: Company/undertaking identification

Department issuing data sheet

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



SAFETY DATA SHEET

in accordance with 29 CFR 1910.1200 and ANSI standard Z400.1-2010

Airfill 2 Filler Paste

Material number 1036

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Page: 13 of 13

This data sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, and which additional precautions may be necessary. All health and safety information contained in this data sheet should be provided to your employees and customers. It is your responsibility to develop appropriate workplace instructions and training programs for employees.

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