MATERIAL SAFETY DATA SHEET

GRP BATHROOM REPAIR KIT

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830 - Ireland

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

1.1 Product identifier

Product name : GC 65PA White 337 (BERG)

Product code : G2029100

Product type : Liquid.

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

Identified uses
Gelcoat

1.3 Details of the supplier of the safety data sheet

Scott Bader Co Ltd,
Wollaston.
Northants
NN297RL
United Kingdom
+44 (0)1933663100

e-mail address of person responsible for this SDS : SDS@scottbader.com

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9. Tel 01 8092566.

Supplier

Telephone number (Hours of operation) : +44 1865 407333 (NCEC) 24h

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226
Acute Tox. 4, H332
Skin Irrit. 2, H315
Eye Irrit. 2, H319
Skin Sens. 1, H317
Repr. 2, H361d (Unborn child)
STOT SE 3, H335
STOT RE 1, H372
Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

SECTION 2: Hazards identification

Hazard pictograms :

Signal word : Danger

Hazard statements : H226 - Flammable liquid and vapour.
H332 - Harmful if inhaled.
H319 - Causes serious eye irritation.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H361d - Suspected of damaging the unborn child.
H335 - May cause respiratory irritation.
H372 - Causes damage to organs through prolonged or repeated exposure.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : P201 - Obtain special instructions before use.
P280 - Wear protective gloves. Wear protective clothing. Wear eye/face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 - Avoid release to the environment.
P260 - Do not breathe vapour.

Response : P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

Storage : P405 - Store locked up.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients : styrene
cobalt bis(2-ethylhexanoate)

Supplemental label elements : Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

2.3 Other hazards

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

Substance/mixture : Mixture

Product/ingredient name	Identifiers	%	Classification Regulation (EC) No. 1272/2008 [CLP]	Type
styrene	REACH #: 01-2119457861-32 EC: 202-851-5 CAS: 100-42-5 Index: 601-026-00-0	≥25 - ≤50	Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 2, H361d (Unborn child) STOT SE 3, H335 STOT RE 1, H372 (hearing organs)	[1] [2]

SECTION 3: Composition/information on ingredients

			Asp. Tox. 1, H304 Aquatic Chronic 3, H412	
oxybenzone	EC: 205-031-5 CAS: 131-57-7	≤0.3	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 2, H411	[1]
cobalt bis (2-ethylhexanoate)	REACH #: 01-2119524678-29 EC: 205-250-6 CAS: 136-52-7	≤0.3	Eye Irrit. 2, H319 Skin Sens. 1A, H317 Repr. 2, H361f (Fertility) Aquatic Acute 1, H400 (M=1) Aquatic Chronic 3, H412	[1] [2]
1-methoxy-2-propanol	REACH #: 01-2119457435-35 EC: 203-539-1 CAS: 107-98-2 Index: 603-064-00-3	≤0.1	Flam. Liq. 3, H226 STOT SE 3, H336	[1] [2]
(2-methoxymethylethoxy) propanol	REACH #: 01-2119450011-60 EC: 252-104-2 CAS: 34590-94-8	≤0.1	Not classified.	[2]
phenol	EC: 203-632-7 CAS: 108-95-2 Index: 604-001-00-2	<0.1	Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Muta. 2, H341 STOT RE 2, H373 **See Section 16 for the full text of the H statements declared above.**	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
[5] Substance of equivalent concern
[6] Additional disclosure due to company policy

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

SECTION 4: First aid measures

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Harmful if inhaled. May cause respiratory irritation.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
reduced foetal weight
increase in foetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced foetal weight
increase in foetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

SECTION 5: Firefighting measures

Hazards from the substance or mixture : Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Seveso Directive - Reporting thresholds (in tonnes)

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P5c: Flammable liquids 2 and 3 not falling under P5a or P5b	5000	50000

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
styrene	**NAOSH (Ireland, 3/2016).** OELV-8hr: 20 ppm 8 hours. OELV-8hr: 85 mg/m³ 8 hours. OELV-15min: 40 ppm 15 minutes. OELV-15min: 170 mg/m³ 15 minutes.
cobalt bis(2-ethylhexanoate)	**NAOSH (Ireland, 3/2016). Skin sensitiser.** OELV-8hr: 0.1 mg/m³, (as Co) 8 hours.
1-methoxy-2-propanol	**NAOSH (Ireland, 3/2016).**

SECTION 8: Exposure controls/personal protection

	OELV-8hr: 100 ppm 8 hours. OELV-8hr: 375 mg/m³ 8 hours. OELV-15min: 150 ppm 15 minutes. OELV-15min: 568 mg/m³ 15 minutes.
(2-methoxymethylethoxy)propanol	**NAOSH (Ireland, 3/2016). Absorbed through skin.** OELV-8hr: 50 ppm 8 hours. OELV-8hr: 308 mg/m³ 8 hours.
phenol	**NAOSH (Ireland, 3/2016). Absorbed through skin.** OELV-8hr: 2 ppm 8 hours. OELV-8hr: 8 mg/m³ 8 hours. OELV-15min: 16 mg/m³ 15 minutes. OELV-15min: 4 ppm 15 minutes.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
styrene	DNEL	Short term Inhalation	289 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	306 mg/m³	Workers	Local
	DNEL	Long term Dermal	406 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	85 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	174.25 mg/m³	Consumers	Systemic
	DNEL	Short term Inhalation	182.75 mg/m³	Consumers	Local
	DNEL	Long term Dermal	343 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	10.2 mg/m³	Consumers	Systemic
	DNEL	Long term Oral	2.1 mg/kg bw/day	Consumers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
styrene	Fresh water	0.028 mg/l	-
	Marine water	0.0028 mg/l	-
	Fresh water sediment	0.614 mg/kg dwt	-
	Marine water sediment	0.0614 mg/kg dwt	-
	Soil	0.2 mg/kg dwt	-
	Sewage Treatment Plant	5 mg/l	-

8.2 Exposure controls

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. Recommended: chemical splash goggles and/or face shield.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. > 8 hours (breakthrough time): polyvinyl alcohol (PVA) Viton® fluor rubber

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods. Recommended: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: organic vapour filter (Type A)

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.

Colour : Not available.

Odour : Solvent

Odour threshold : Not available.

pH : Not available.

Melting point/freezing point : Not available.

SECTION 9: Physical and chemical properties

Initial boiling point and boiling range	:	Not available.
Flash point	:	Closed cup: 23 to 37.8°C
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Burning time	:	Not applicable.
Burning rate	:	Not applicable.
Upper/lower flammability or explosive limits	:	Not available.
Vapour pressure	:	Not available.
Vapour density	:	Not available.
Relative density	:	1.1 to 1.2
Solubility(ies)	:	Not available.
Solubility in water	:	Not available.
Partition coefficient: n-octanol/ water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
Viscosity	:	Kinematic (40°C): >0.4 cm^2/s
Explosive properties	:	Not available.
Oxidising properties	:	Not available.

9.2 Other information

Heat of combustion	:	Not available.
Enclosed space ignition - Time equivalent	:	Not applicable.

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
styrene	LC50 Inhalation Gas.	Rat	2770 ppm	4 hours
	LC50 Inhalation Vapour	Rat	11800 mg/m³	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	2650 mg/kg	-
oxybenzone	LD50 Oral	Rat	7400 mg/kg	-
cobalt bis(2-ethylhexanoate)	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
1-methoxy-2-propanol	LD50 Dermal	Rabbit	13 g/kg	-
	LD50 Oral	Rat	6600 mg/kg	-
phenol	LD50 Dermal	Rabbit	630 mg/kg	-
	LD50 Dermal	Rat	669 mg/kg	-
	LD50 Oral	Rat	317 mg/kg	-

Conclusion/Summary : Not available.

Acute toxicity estimates

Route	ATE value
Inhalation (gases)	9685.6 ppm
Inhalation (vapours)	41.26 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
styrene	Eyes - Mild irritant	Human	-	50 parts per million	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-
1-methoxy-2-propanol	Skin - Mild irritant	Rabbit	-	500 milligrams	-
phenol	Eyes - Mild irritant	Rabbit	-	0.5 minutes 5 milligrams	-
	Eyes - Severe irritant	Rabbit	-	5 milligrams	-
	Skin - Severe irritant	Pig	-	0.5 minutes 400 microliters	-
	Skin - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Severe irritant	Rabbit	-	535 milligrams	-

Conclusion/Summary : Not available.

Sensitisation

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

SECTION 11: Toxicological information

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
styrene	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
styrene	Category 1	Not determined	hearing organs

Aspiration hazard

Product/ingredient name	Result
styrene	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Harmful if inhaled. May cause respiratory irritation.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
reduced foetal weight
increase in foetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced foetal weight
increase in foetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

SECTION 11: Toxicological information

Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure
styrene	Chronic NOAEL Dermal Chronic NOAEL Inhalation Gas.	Rat Rat	615 mg/kg 20 ppm	- 8 hours

Conclusion/Summary : Not available.

General : Causes damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
styrene	Acute EC50 1400 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 33 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 4700 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 52 mg/l Marine water	Crustaceans - Artemia salina	48 hours
	Acute LC50 4020 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 1.01 mg/l	Daphnia	21 days
oxybenzone	Chronic EC10 3.69 µg/l Marine water	Algae - Isochrysis galbana - Exponential growth phase	72 hours
	Chronic NOEC 90 µg/l Fresh water	Fish - Oryzias latipes - Adult	28 days
phenol	Chronic NOEC 16 µg/l Marine water	Algae - Hormosira banksii - Gamete	72 hours
	Chronic NOEC 1.5 mg/l Fresh water	Daphnia - Daphnia magna	21 days

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
styrene	-	-	Readily
oxybenzone	-	-	Not readily
cobalt bis(2-ethylhexanoate)	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
styrene	0.35	13.49	low
oxybenzone	3.79	39 to 160	low
cobalt bis(2-ethylhexanoate)	-	15600	high
1-methoxy-2-propanol	<1	-	low
(2-methoxymethylethoxy) propanol	0.004	-	low
phenol	1.47	647	high

SECTION 12: Ecological information

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	UN1866	UN1866	UN1866
14.2 UN proper shipping name	RESIN SOLUTION	RESIN SOLUTION	Resin solution
14.3 Transport hazard class(es)	3 	3 	3 
14.4 Packing group	III	III	III
14.5 Environmental hazards	No.	No.	No.

SECTION 14: Transport information

Additional information	**Hazard identification number** 30 **Limited quantity** 5 L **Special provisions** 640E **Tunnel code** (D/E)	**Emergency schedules** F-E, _S-E_ **Special provisions** 223, 955	**Quantity limitation** Passenger and Cargo Aircraft: 60 L. Packaging instructions: 355. Cargo Aircraft Only: 220 L. Packaging instructions: 366. Limited Quantities - Passenger Aircraft: 10 L. Packaging instructions: Y344. **Special provisions** A3

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
styrene	-	-	Repr. 2, H361d (Unborn child)	-
cobalt bis (2-ethylhexanoate)	-	-	-	Repr. 2, H361f (Fertility)
phenol	-	Muta. 2, H341	-	-

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
P5c: Flammable liquids 2 and 3 not falling under P5a or P5b

International regulations

Listed on inventory. : Not determined

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Acute Tox. 4, H332	Calculation method
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Skin Sens. 1, H317	Calculation method
Repr. 2, H361d (Unborn child)	Calculation method
STOT SE 3, H335	Calculation method
STOT RE 1, H372	Calculation method
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements :

H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H361d	Suspected of damaging the unborn child.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS] :

Acute Tox. 3, H301	ACUTE TOXICITY (oral) - Category 3
Acute Tox. 3, H311	ACUTE TOXICITY (dermal) - Category 3
Acute Tox. 3, H331	ACUTE TOXICITY (inhalation) - Category 3
Acute Tox. 4, H332	ACUTE TOXICITY (inhalation) - Category 4
Aquatic Acute 1, H400	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 2, H411	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3, H412	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Asp. Tox. 1, H304	ASPIRATION HAZARD - Category 1
Eye Dam. 1, H318	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 3, H226	FLAMMABLE LIQUIDS - Category 3
Muta. 2, H341	GERM CELL MUTAGENICITY - Category 2
Repr. 2, H361d	REPRODUCTIVE TOXICITY (Unborn child) - Category 2
Repr. 2, H361f	REPRODUCTIVE TOXICITY (Fertility) - Category 2

SECTION 16: Other information

Skin Corr. 1B, H314	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1, H317	SKIN SENSITISATION - Category 1
Skin Sens. 1A, H317	SKIN SENSITISATION - Category 1A
STOT RE 1, H372	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
STOT RE 2, H373	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3
STOT SE 3, H336	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3

Date of printing : 03/07/2018

Date of issue/ Date of revision : 03/07/2018

Date of previous issue : 17/04/2018

Version : 2

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

BUTANOX M-50

Version 1 Revision Date 18.09.2015 Print Date 21.10.2015 IE / EN

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name : BUTANOX M-50

REACH Registration Number : 01-2119514691-43

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

Use of the Substance/Mixture : Specific use(s): Curing agent

1.3 Details of the supplier of the safety data sheet

Company : Akzo Nobel Functional Chemicals B.V.
Stationsstraat 77
NL 3811 MH Amersfoort
Netherlands

Telephone : +31334676767
Telefax : +31334676100
E-mail address : RegulatoryAffairs@akzonobel.com

1.4 Emergency telephone number

Emergency telephone number : AkzoNobel: +31 57 06 79211

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)
Organic peroxides, D, H242, On basis of test data.
Acute toxicity, 4, H302, On basis of test data.
Skin corrosion, 1B, H314, Calculation method

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification (67/548/EEC, 1999/45/EC)
Oxidising, O, R 7
Corrosive, C, R34
Harmful, Xn, R22

For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Symbol(s) :

Signal word : Danger

Hazard statements	: H242	Heating may cause a fire.
	H302	Harmful if swallowed.
	H314	Causes severe skin burns and eye damage.
Precautionary statements	: **Prevention:**	
	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P220	Keep away from dirt, rust, chemicals in particular.
	P234	Keep only in original container.
	P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
	Response:	
	P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Hazardous components which must be listed on the label:

Methyl ethyl ketone peroxide;Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane 1338-23-4

2.3 Other hazards

No further data available.

PBT and vPvB assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Hazardous substance

Chemical Name	PBT vPvB OEL	CAS-No. EC-No. REACH No.	Classification (REGULATION (EC) No 1272/2008)	Classification (67/548/EEC)	Concentration [%]
Methyl ethyl ketone peroxide;Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane		1338-23-4 215-661-2 01-2119514691-43	Org. Perox. A; H240 Acute Tox. 4; H302 Skin Corr. 1B; H314	E; R 2 C; R34 O; R 7 Xn; R22	30 - 40
Methyl ethyl ketone		78-93-3 201-159-0	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	F; R11 Xi; R36 R66 R67	1 - 3

Remarks : Methyl ethyl ketone peroxide 30-37% solution in dimethyl phthalate

For the full text of the H-Statements mentioned in this Section, see Section 16.

For the full text of the R-phrases mentioned in this Section, see Section 16.

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice : Immediate medical attention is required.
Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.

If inhaled : If breathed in, move person into fresh air.
Consult a physician after significant exposure.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Rinse immediately with plenty of water.
Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.

In case of eye contact : Rinse with plenty of water.
Get medical attention immediately. Continue to rinse during

transport.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
Small amounts splashed into eyes can cause irreversible tissue damage and blindness.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Never give anything by mouth to an unconscious person.
Take victim immediately to hospital.
Do not induce vomiting! May cause chemical burns in mouth and throat.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : The symptoms and effects are as expected from the hazards as shown in section 2. No specific product related symptoms are known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting / Specific hazards arising from the chemical : CAUTION: reignition may occur.
Supports combustion.
Water spray may be ineffective unless used by experienced firefighters.
Heating may cause decomposition with release of toxic fumes
Do not allow run-off from fire fighting to enter drains or water courses.

Combustion products : Fire will produce smoke containing hazardous combustion products (see section 10).

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Use water spray to cool unopened containers.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.

Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.2 Environmental precautions

Environmental precautions	:	Prevent product from entering drains. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up / Methods for containment	:	Keep wetted with water. Soak up with inert absorbent material and dispose of as hazardous waste. Confinement must be avoided. Never return spills in original containers for re-use.

6.4 Reference to other sections

Additional advice	:	For personal protection see section 8.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling	:	For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.
Advice on protection against fire and explosion	:	Use explosion protected equipment. Keep away from sources of ignition - No smoking. No sparking tools should be used. Keep away from reducing agents (e.g. amines), acids, alkalies and heavy metal compounds (e.g. accelerators, driers, metal soaps). Do not cut or weld on or near this container even when empty. Keep away from combustible material.
Temperature class	:	It is recommended to use electrical equipment of temperature group T3. However, autoignition can never be excluded.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	No smoking. Electrical installations / working materials must comply with the technological safety standards. Keep only in original container. Store away from other materials.
Maximum storage temperature:	:	25 °C
Other data	:	No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s)	:	Consult the technical guidelines for the use of this substance/mixture.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis	Form of exposure
Dimethyl phthalate	131-11-3	OELV - 8 hrs (TWA)	5 mg/m3	2002-03-12	IE OEL	
		OELV - 15 min (STEL)	10 mg/m3	2002-03-12	IE OEL	
Methyl ethyl ketone peroxide;Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane	1338-23-4	OELV - 15 min (STEL)	0.2 ppm 1.5 mg/m3	2002-03-12	IE OEL	
Methyl ethyl ketone	78-93-3	TWA	200 ppm 600 mg/m3	2009-12-19	2000/39/EC	
	Further information	:	Indicative			
		STEL	300 ppm 900 mg/m3	2009-12-19	2000/39/EC	
	Further information	:	Indicative			
		OELV - 8 hrs (TWA)	200 ppm 600 mg/m3	2007-08-17	IE OEL	
	Further information	:	Sk: Substances w hich have the capacity to penetrate intact skin w hen they come in contact w ith it, and be absorbed into the body IOELV: Indicative Occupational Exposure Limit Value			
		OELV - 15 min (STEL)	300 ppm 900 mg/m3	2007-08-17	IE OEL	
	Further information	:	Sk: Substances w hich have the capacity to penetrate intact skin w hen they come in contact w ith it, and be absorbed into the body IOELV: Indicative Occupational Exposure Limit Value			

STEL: Short term exposure limit
TWA: Time Weighted Average

Occupational exposure limits of decomposition products

Decomposition products	CAS-No.	Value	Control parameters	Update	Basis	Form of exposure
Formic acid	64-18-6, 64-18-6	TWA	5 ppm 9 mg/m3	2009-12-19		
	Further information	:				
		OELV - 8 hrs (TWA)	5 ppm 9 mg/m3	2007-08-17		
	Further information	:				
Acetic acid	64-19-7, 64-19-7	TWA	10 ppm 25 mg/m3	2009-12-19		
	Further information	:				

		OELV - 8 hrs (TWA)	10 ppm 25 mg/m3	2002-03-12		
		OELV - 15 min (STEL)	15 ppm 37 mg/m3	2002-03-12		
Propionic acid	79-09-4, 79-09-4	TWA	10 ppm 31 mg/m3	2009-12-19		
	Further information	:				
		STEL	20 ppm 62 mg/m3	2009-12-19		
	Further information	:				
		OELV - 8 hrs (TWA)	10 ppm 31 mg/m3	2010-04-30		
	Further information	:				
		OELV - 15 min (STEL)	20 ppm 62 mg/m3	2010-04-30		
	Further information	:				
Methyl ethyl ketone	78-93-3, 78-93-3	TWA	200 ppm 600 mg/m3	2009-12-19		
	Further information	:				
		STEL	300 ppm 900 mg/m3	2009-12-19		
	Further information	:				
		OELV - 8 hrs (TWA)	200 ppm 600 mg/m3	2007-08-17		
	Further information	:				
		OELV - 15 min (STEL)	300 ppm 900 mg/m3	2007-08-17		
	Further information	:				

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006

Substance name	End Use	Exposure routes	Potential health effects	Value
Methyl ethyl ketone peroxide;Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane	Consumers	Skin contact	Long-term systemic effects	0.54 mg/kg
	Consumers	Inhalation	Long-term systemic effects	0.41 mg/m3
	Consumers	Ingestion	Long-term systemic effects	0.27 mg/kg
	Workers	Skin contact	Long-term systemic effects	1.08 mg/kg
	Workers	Inhalation	Long-term systemic effects	1.9 mg/m3
Methyl ethyl ketone	Workers	Inhalation	Long-term systemic	600 mg/m3

			effects	
	Workers	Skin contact	Long-term systemic effects	1161 mg/kg
	Consumers	Inhalation	Long-term systemic effects	106 mg/m3
	Consumers	Skin contact	Long-term systemic effects	412 mg/kg
	Consumers	Ingestion	Long-term systemic effects	31 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006

Substance name	Environmental Compartment	Value
Methyl ethyl ketone peroxide;Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane	Fresh water	0.0056 mg/l
	Intermittent water	0.056 mg/l
	Marine water	0.00056 mg/l
	Fresh water sediment	0.019 mg/kg dry weight
	Marine sediment	0.0019 mg/kg dry weight
	Sewage treatment plant	1.2 mg/l
	Soil	0.00231 mg/kg dry weight
Methyl ethyl ketone	Fresh water	55.8 mg/l
	Marine water	55.8 mg/l
	Intermittent water	55.8 mg/l
	Sewage treatment plant	709 mg/l
	Fresh water sediment	284.74 mg/kg dry weight
	Marine sediment	284.74 mg/kg dry weight
	Soil	22.5 mg/kg dry weight
	Oral	1000 mg/kg food

8.2 Exposure controls

Engineering controls
Explosion proof ventilation recommended.
Effective exhaust ventilation system
Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Respiratory protection : In the case of vapour or aerosol formation use a respirator with an approved filter.
Filter A

Hand protection : butyl-rubber

Neoprene

Eye protection : Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : Protective suit

Hygiene measures : Handle in accordance with good industrial hygiene and safety

practice.
When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

Environmental exposure controls

General advice : Prevent product from entering drains.
If the product contaminates rivers and lakes or drains inform respective authorities.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

Form	:	liquid
Colour	:	clear colourless
Odour	:	Faint.
Odour Threshold	:	No data available

Safety data

pH	:	Weakly acidic
Melting point	:	No data available
Boiling point/boiling range	:	Decomposes below the boiling point.
Flash point	:	Above the SADT value No flash point was obtained, but the product may release flammable vapour.
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Decomposition products may be flammable.
Lower explosion limit	:	No data available
Upper explosion limit	:	No data available
Vapour pressure	:	1 hPa at 84 °C
Relative vapour density	:	No data available
Relative density	:	1.180 at 20 °C
Bulk density	:	Not applicable
Water solubility	:	at 20 °C partly miscible
Solubility in other solvents	:	20 °C Miscible with:, Phthalates

Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	Test method not applicable
Decomposition temperature	:	SADT - (Self accelerating decomposition temperature) is the lowest temperature at which self accelerating decomposition may occur with a substance in the packaging as used in transport. A dangerous self-accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by thermal decomposition at and above the SADT. Contact with incompatible substances can cause decomposition below the SADT.
Self-Accelerating decomposition temperature (SADT)	:	60 °C
Viscosity, dynamic	:	24 mPa.s at 20 °C
Viscosity, kinematic	:	20.34 mm2/s at 20 °C
Explosive properties	:	Not explosive
Oxidizing properties	:	Not classified as oxidising.

9.2 Other information

Active Oxygen Content	:	8.8 - 9.0 %
Organic peroxides	:	30 - 37 %

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid	:	Confinement must be avoided. Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid	:	Contact with incompatible materials will result in hazardous decomposition. For queries regarding the suitability of other materials please contact the supplier. Do not mix with peroxide accelerators, unless under controlled

processing.
Use only stainless steel 316, PP, polyethylene or glass-lined equipment.
Acids and bases
Iron
Copper
Reducing agents
Heavy metals
Rust

10.6 Hazardous decomposition products

Hazardous decomposition products	:	Carbon oxides Formic acid Acetic acid Propionic acid Methyl ethyl ketone
Thermal decomposition	:	SADT - (Self accelerating decomposition temperature) is the lowest temperature at which self accelerating decomposition may occur with a substance in the packaging as used in transport. A dangerous self-accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by thermal decomposition at and above the SADT. Contact with incompatible substances can cause decomposition below the SADT.
Self-Accelerating decomposition temperature (SADT)	:	60 °C

SECTION 11: TOXICOLOGICAL INFORMATION

Product information:
Hazard Summary

Inhalation	:	Inhalation of aerosols may cause irritation to mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours.
Skin	:	Symptoms may be delayed. May be harmful in contact with skin. Causes severe skin burns.
Eyes	:	Causes serious eye damage.
Ingestion	:	Harmful if swallowed. Causes burns.

Toxicology Assessment

Acute effects	:	Causes eye burns. Causes skin burns. Harmful if swallowed. May be harmful in contact with skin or if inhaled.
Further information	:	No further data available.

11.1 Information on toxicological effects

Test result

Acute oral toxicity	:	LD50: 1,017 mg/kg Species: rats Method: OECD Test Guideline 401
Acute inhalation toxicity	:	LC50 (Rat): 17 mg/l Exposure time: 4 h Test atmosphere: vapour Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50: 4,000 mg/kg Species: Rat Method: OECD Test Guideline 402
Skin irritation	:	Species: Rabbit Result: Sub-category 1B Classification: Sub-category 1B Method: Tested according to Annex V of Directive 67/548/EEC.
Eye irritation	:	Species: Rabbit Result: Risk of serious damage to eyes. Classification: Risk of serious damage to eyes. Method: Tested according to Annex V of Directive 67/548/EEC.

Toxicology data for the components:
Test result
Methyl ethyl ketone peroxide;Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane

Acute oral toxicity	:	LD50: 1,017 mg/kg Species: Rat
Acute inhalation toxicity	:	LC50 (Rat): 17 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50: 4,000 mg/kg Species: Rat
Skin irritation	:	Result: Causes burns.
Eye irritation	:	Result: Risk of serious damage to eyes.

Germ cell mutagenicity

Genotoxicity in vitro	:	Ames test Result: negative
Genotoxicity in vivo	:	Not classified due to data which are conclusive although insufficient for classification.
Carcinogenicity	:	No data available
Reproductive toxicity/Fertility	:	Species: Rat, male and female

Application Route: Oral
Dose: 0, 25, 50, 75 milligram per kilogram
General Toxicity - Parent: No observed adverse effect level: 50 mg/kg bw/day
General Toxicity F1: No observed adverse effect level F1: 50 mg/kg bw/day
Fertility: No observed adverse effect level Parent: 75 mg/kg bw/day
Method: OECD Test Guideline 421
GLP: yes

Target Organ Systemic Toxicant - Repeated exposure	:	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Aspiration toxicity	:	No aspiration toxicity classification

Methyl ethyl ketone

Acute oral toxicity	:	LD50: 2,737 mg/kg Species: Rat
Acute dermal toxicity	:	LD50: 6,480 mg/kg Species: Rabbit
Skin irritation	:	Result: Repeated exposure may cause skin dryness or cracking. Moderately irritating.
Eye irritation	:	Result: Irritating to eyes.
Target Organ Systemic Toxicant - Single exposure	:	Exposure routes: Inhalation The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.
Aspiration toxicity	:	No aspiration toxicity classification

SECTION 12: ECOLOGICAL INFORMATION

Product information:
Ecotoxicology Assessment

Acute aquatic toxicity	:	Harmful to fish.
Chronic aquatic toxicity	:	No toxicity at the limit of solubility
Additional ecological information	:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

12.1 Toxicity

Components:
Ecotoxicology Assessment
Methyl ethyl ketone peroxide;Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane

Acute aquatic toxicity	:	Harmful to aquatic life.

Test result

Methyl ethyl ketone peroxide;Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane

Toxicity to fish	:	LC50: 44.2 mg/l Exposure time: 96 h Species: Poecilia reticulata (guppy) Test Type: semi-static test
Toxicity to daphnia and other aquatic invertebrates	:	39 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea) Test Type: Immobilization
Toxicity to algae	:	LC50: 5.6 mg/l Exposure time: 72 h Species: Pseudokirchneriella subcapitata (algae) Test Type: Growth inhibition
Toxicity to bacteria	:	EC10: 12 mg/l Exposure time: 0.5 h Species: activated sludge Test Type: Respiration inhibition Method: Domestic OECD Guideline 209

Methyl ethyl ketone

Toxicity to fish	:	LC50: 3,220 mg/l Exposure time: 96 h Species: Lepomis macrochirus (Bluegill sunfish)

12.2 Persistence and degradability

Product information : No information available.

Components:
Methyl ethyl ketone peroxide;Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane

Biodegradability	:	Result: Readily biodegradable Method: Closed Bottle test

Methyl ethyl ketone

Biodegradability	:	Result: Readily biodegradable

12.3 Bioaccumulative potential

Product information : No information available.

Components : No information available.

12.4 Mobility in soil

Product information : No information available.

Components : No information available.

12.5 Results of PBT and vPvB assessment

Product information:

PBT and vPvB assessment	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Components : No information available.

12.6 Other adverse effects

Product information : No information available.

Components : No information available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Hazardous waste
Dispose of contents/container in accordance with local regulation.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not burn, or use a cutting torch on, the empty drum.
Due to the high risk of contamination recycling/recovery is not recommended.
Follow all warnings even after the container is emptied.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

ADN : UN 3105
ADR : UN 3105
RID : UN 3105
IMDG-Code : UN 3105
IATA-DGR : UN 3105

14.2 Proper shipping name

ADN : ORGANIC PEROXIDE TYPE D, LIQUID (Methyl ethyl ketone peroxide)
ADR : ORGANIC PEROXIDE TYPE D, LIQUID (Methyl ethyl ketone peroxide)
RID : ORGANIC PEROXIDE TYPE D, LIQUID (Methyl ethyl ketone peroxide)
IMDG-Code : ORGANIC PEROXIDE TYPE D, LIQUID (Methyl ethyl ketone peroxide)
IATA-DGR : Organic peroxide type D, liquid (Methyl ethyl ketone peroxide)

14.3 Transport hazard class

ADN : 5.2
ADR : 5.2
RID : 5.2
IMDG-Code : 5.2
IATA-DGR : 5.2 (HEAT)

14.4 Packing group

ADN
Packing group : Not Assigned
Classification Code : P1

Labels	:	5.2
ADR		
Packing group	:	Not Assigned
Classification Code	:	P1
Labels	:	5.2
Tunnel restriction code	:	(D)
RID		
Packing group	:	Not Assigned
Classification Code	:	P1
Hazard Identification Number	:	539
Labels	:	5.2
IMDG-Code		
Packing group	:	Not Assigned
Labels	:	5.2
EmS Code	:	F-J, S-R
IATA-DGR		
Packing instruction (cargo aircraft)	:	570
Packing instruction (passenger aircraft)	:	570
Packing group	:	Not Assigned
Labels	:	5.2 (HEAT)

14.5 Environmental hazards

ADN		
Environmentally hazardous	:	no
ADR		
Environmentally hazardous	:	no
RID		
Environmentally hazardous	:	no
IMDG-Code		
Marine pollutant	:	no
IATA-DGR		
Environmentally hazardous	:	no

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

SECTION 15: REGULATORY INFORMATION

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

Major Accident Hazard Legislation	:	ZEU_SEVES3 SELF-REACTIVE SUBSTANCES AND MIXTURES and ORGANIC PEROXIDES P6b Quantity 1: 50 t Quantity 2: 200 t
Water contaminating class (Germany)	:	WGK 1 slightly water endangering

Notification status

CH INV	:	YES. On the inventory, or in compliance with the inventory
TSCA	:	YES. All chemical substances in this product are either listed on the TSCA Inventory or in compliance with a TSCA Inventory exemption.
DSL	:	YES. All components of this product are on the Canadian DSL.
AICS	:	YES. On the inventory, or in compliance with the inventory
NZIoC	:	YES. On the inventory, or in compliance with the inventory
ENCS	:	YES. On the inventory, or in compliance with the inventory
ISHL	:	YES. On the inventory, or in compliance with the inventory
KECI	:	YES. On the inventory, or in compliance with the inventory
PICCS	:	YES. On the inventory, or in compliance with the inventory
IECSC	:	YES. On the inventory, or in compliance with the inventory

For explanation of abbreviation see section 16.

Further information
This product is to be considered as a substance according to EU-legislation.

15.2 Chemical Safety Assessment

Methyl ethyl ketone peroxide;Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane	:	A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

H225	:	Highly flammable liquid and vapour.
H240	:	Heating may cause an explosion.
H242	:	Heating may cause a fire.
H302	:	Harmful if swallowed.
H314	:	Causes severe skin burns and eye damage.
H319	:	Causes serious eye irritation.
H336	:	May cause drowsiness or dizziness.

Full text of R-phrases referred to under sections 2 and 3

R 2	Risk of explosion by shock, friction, fire or other sources of ignition.
R 7	May cause fire.
R11	Highly flammable.
R22	Harmful if swallowed.
R34	Causes burns.
R36	Irritating to eyes.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.

Explanations for possible abbreviations mentioned in section 2

PBT	:	PBT: Persistent, bioaccumulative and toxic.
vPvB	:	vPvB: Very persistent and very bioaccumulative.
OEL	:	OEL: Occupational exposure limit.

Notification status explanation

CH INV	Switzerland. New notified substances and declared preparations
TSCA	United States TSCA Inventory
DSL	Canadian Domestic Substances List (DSL)
AICS	Australia Inventory of Chemical Substances (AICS)
NZIoC	New Zealand. Inventory of Chemical Substances

ENCS	Japan. ENCS - Existing and New Chemical Substances Inventory
ISHL	Japan. ISHL - Inventory of Chemical Substances
KECI	Korea. Korean Existing Chemicals Inventory (KECI)
PICCS	Philippines Inventory of Chemicals and Chemical Substances (PICCS)
IECSC	China. Inventory of Existing Chemical Substances in China (IECSC)

Further information

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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GRP ACETONE

Barrettine

SAFETY DATA SHEET
Acetone

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME	Acetone
REACH REGISTRATION NUMBER	01-2119471330-xxxx
CAS-NO.	67-64-1
EC (EINECS) NO.	200-662-2
PRODUCT NO.	ACETGEN
APPLICATION	Industrial uses. All professional uses All consumer uses
SUPPLIER	Barrettine Barrettine Works St Ivel Way Warmley Bristol BS30 8TY Tel: 0117 960 0060 Fax: 0117 935 2437 sales@barrettine.co.uk
EMERGENCY TELEPHONE	+44 (0)1270 502 891

2 HAZARDS IDENTIFICATION

CLASSIFICATION (1999/45) Xi;R36. F;R11. R66, R67.

CLASSIFICATION (EC 1272/2008)

Physical and Chemical Hazards	Flam. Liq. 2 - H225
Human health	EUH066;Eye Irrit. 2 - H319;STOT SE 3 - H336
Environment	Not classified.

LABEL IN ACCORDANCE WITH (EC) NO. 1272/2008

SIGNAL WORD Danger

CONTAINS ACETONE

HAZARD STATEMENTS

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

PRECAUTIONARY STATEMENTS

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

P261	Avoid breathing vapours.
P280	Wear protective gloves.
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P370+378A	In case of fire: Use foam, carbon dioxide, dry powder or other inert material for extinction. Do not use high pressure water jet as this may spread burning material.
P501D	Empty containers may contain residual product and vapours. Do not cut or weld on or near empty containers. Disposal should only be by means of a licensed waste disposal contractor.

SUPPLEMENTARY PRECAUTIONARY STATEMENTS

P243	Take precautionary measures against static discharge.
P271	Use only outdoors or in a well-ventilated area.
P303+361+353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403+233+235	Store in a well-ventilated place. Keep container tightly closed, Keep cool.

Supplemental Label Information (EU)

EUH066	Repeated exposure may cause skin dryness or cracking.

3 COMPOSITION/INFORMATION ON INGREDIENTS

ACETONE >98%

CAS-No.: 67-64-1 EC No.: 200-662-2 Registration Number: 01-2119471330-49-XXXX

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Liq. 2 - H225	F;R11
EUH066	Xi;R36
Eye Irrit. 2 - H319	R66
STOT SE 3 - H336	R67

The Full Text for all R-Phrases and Hazard Statements is Displayed in Section 16

EC (EINECS) NO. 200-662-2

CAS-NO. 67-64-1

COMPOSITION COMMENTS

This product is not a mixture.

4 FIRST-AID MEASURES

GENERAL INFORMATION

Remove affected person from source of exposure. Provide fresh air, first-aid, warmth and rest.
Never give victim anything to drink if they are unconscious. Get medical attention if any discomfort continues.

NOTES TO THE PHYSICIAN

No specific first aid measures noted.

INHALATION

If unconscious or breathing is irregular place on their side in the recovery position and ensure their airways are clear.
Artificial respiration may be administered by suitably qualified first-aiders if the patient is unconscious or breathing is difficult.
Get immediate medical attention.

INGESTION

If swallowed do NOT induce vomiting.
Never give anything by mouth to an unconscious person. Rinse mouth thoroughly and seek medical attention if discomfort persists. Keep patient under observation.

SKIN CONTACT

Immediately remove contaminated clothing. Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water. Launder clothing before reuse.

EYE CONTACT

Check for contact lenses which must be removed from the eyes before rinsing.
Promptly rinse eyes with plenty of clean water while lifting the eyelids.
Continue to rinse for at least 15 minutes. Continue until the eyes are free of all traces of contamination.
Get medical attention if any discomfort or irritation persists.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

SPECIAL FIRE FIGHTING PROCEDURES

Cool containers exposed to flames with water until well after the fire is out.

SPECIFIC HAZARDS

In fire conditions this product as well as giving off intense heat may evolve gaseous oxides of carbon and nitrogen. Burning material gives off dense acrid smoke and fumes which may contain other toxic and harmful gases. Vapours are heavier than air and may travel along the floor and in the bottom of containers. Vapours may be ignited by a spark, a hot surface or an ember.

PROTECTIVE MEASURES IN FIRE

Wear self-contained breathing apparatus and full protective clothing. Keep all unnecessary people away. Fire water run-off must not be allowed to contaminate ground or enter drains, sewers or water courses. Provide bunding against fire water run-off.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Wear protective clothing (see Section 8). Keep unnecessary people at a safe distance.

ENVIRONMENTAL PRECAUTIONS

Do not discharge onto the ground or into water courses. Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environmental Agency or other appropriate regulatory body. Ensure that waste and contaminated materials are collected and removed from the work area as soon as possible in a suitably labelled container.

SPILL CLEAN UP METHODS

Ventilate well. Extinguish all ignition sources. Avoid sparks, flames, heat. No smoking. Keep flammable materials away from spillage. Clean-up personnel should use respirator and liquid contact protection.
Absorb in vermiculite, dry sand or earth and place into containers. Wash well after dealing with spillage. Inform authorities if large amounts are involved.
Rinse site with copious amounts of water, which should not be allowed into drains, sewers or water courses.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS

Use only with adequate ventilation. Do not breathe vapour or mist.
Keep away from heat, sparks or flame. Containers and equipment must be bonded to avoid static discharge. Use only electrical equipment suitable for explosive atmospheres. Avoid spilling, skin and eye contact. Wash thoroughly after handling.

STORAGE PRECAUTIONS

Store in tightly closed original container in a dry, cool and well-ventilated place. Keep away from heat, sparks and open flame. Keep away from food, drink and animal feeding stuffs. Store away from oxidising materials.

STORAGE CLASS

Flammable liquid storage.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
ACETONE	WEL	500 ppm	1210 mg/m3	1500 ppm	3620 mg/m3	

WEL = Workplace Exposure Limit.

Acetone

STD

WEL = Workplace Exposure Limits

PROCESS CONDITIONS

Provide eyewash station.

ENGINEERING MEASURES

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

RESPIRATORY EQUIPMENT

If ventilation is insufficient suitable respiratory protection must be provided.
Seek advice and recommendations of the manufacturer or supplier of equipment

HAND PROTECTION

Wear suitable protective gloves conforming to EN 374. Seek recommendations from manufacturer or supplier. Suitable gloves may include - Butyl rubber. Neoprene, nitrile, polyethylene or PVC. After using gloves the hands should be washed and thoroughly dried and a suitable moisturiser applied.

EYE PROTECTION

Wear tightly fitting safety goggles conforming to EN 166. Contact lenses should not be worn when working with this chemical!

OTHER PROTECTION

Provide eyewash station and safety shower. Minimise all forms of skin contact. Overalls and footwear with oil and chemical resistant soles should be worn. Launder overalls and undergarments regularly.

HYGIENE MEASURES

Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothes should be removed and laundered before re-use.

SKIN PROTECTION

Avoid prolonged and/or repeated contact with skin.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Liquid
COLOUR	Colourless.
ODOUR	Characteristic.
VOLATILITY DESCRIPTION	Highly volatile.
SOLUBILITY	Completely miscible with water.
BOILING POINT (°C)	56°C
MELTING POINT (°C)	-95°C
RELATIVE DENSITY	0.79 20°C
VAPOUR PRESSURE	240 hPa 20°C
VOLATILE BY VOL. (%)	100
pH-VALUE, CONC. SOLUTION	5-6 @ 20'C
VISCOSITY	0.33 @20'C mPas 25°C
FLASH POINT (°C)	-17°C
AUTO IGNITION TEMPERATURE (°C)	465°C
FLAMMABILITY LIMIT - LOWER(%)	2.2
FLAMMABILITY LIMIT - UPPER(%)	12.8
PARTITION COEFFICIENT (N-Octanol/Water)	-0.24 @ 20'C.
SOLUBILITY VALUE (g/100g H2O@20°C)	miscible
VOLATILE ORGANIC COMPOUND (VOC)	100 % (EC/1999/13)

10 STABILITY AND REACTIVITY

STABILITY

Stable under normal conditions of storage and use. See section 7.

Acetone

CONDITIONS TO AVOID

Avoid heat, flames and other sources of ignition.

MATERIALS TO AVOID

Strong oxidising agents, acids and bases. Peroxides.

HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

11 TOXICOLOGICAL INFORMATION

TOXIC DOSE 1 - LD 50	5800 mg/kg (oral rat)
TOXIC DOSE 2 - LD 50	2000 mg/kg (dermal-rabbit)

TOXICOLOGICAL INFORMATION

Normal precautions necessary for the handling of all chemicals and the information and advice provided in this safety data sheet (SDS) should be observed.

INHALATION

Vapours have a narcotic effect and may cause headache, fatigue, dizziness and nausea.

SKIN CONTACT

Can cause defatting and dryness of skin, leading to cracking and eczema. Not expected to cause harm on brief contact, but prolonged or repeated exposure may lead to dermatitis.

ROUTE OF ENTRY

Inhalation. Skin absorption.

12 ECOLOGICAL INFORMATION

MOBILITY

Contamination will evaporate from the surfaces of water and soil.

BIOACCUMULATION

The product is not bioaccumulating.

DEGRADABILITY

The product is easily biodegradable.

13 DISPOSAL CONSIDERATIONS

GENERAL INFORMATION

Empty containers may contain residual product and flammable vapours. Keep away from sparks, heat and sources of ignition. Labels should not be removed. Empty unlaundered containers must be treated in the same manner as when full; labels should not be removed.

DISPOSAL METHODS

Product is classified as hazardous waste. Disposal of waste material and empty containers must be by means of a licensed waste contractor.

WASTE CLASS

European Waste Catalogue numbers must be determined from the nature of the use and process from which the waste arises.

14 TRANSPORT INFORMATION

PROPER SHIPPING NAME	ACETONE
UN NO. ROAD	1090
ADR CLASS NO.	3
ADR CLASS	Class 3: Flammable liquids.

ADR PACK GROUP	II
TUNNEL RESTRICTION CODE	(D/E)
HAZARD No. (ADR)	33
ADR LABEL NO.	3
HAZCHEM CODE	•2YE
UN NO. SEA	1090
IMDG CLASS	3
IMDG PACK GR.	II
EMS	F-E, S-D
UN NO. AIR	1090
AIR CLASS	3
AIR PACK GR.	II

15 REGULATORY INFORMATION

EU DIRECTIVES

Dangerous Substances DIrective 67/548/EEC.

Dangerous Preparations Directive 1999/45/EC.

EC Regulation 1907/2006 (as amended) : 'REACH'.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

(as amended)

STATUTORY INSTRUMENTS

Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 SI No 716. (CHIP4).

Control of Substances Hazardous to Health Regulations (as amended). (COSHH) Refer to Revised guidance 6th Edition 2013 http://www.hse.gov.uk/pubns/priced/l5.pdf

Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2007. (CDG 2009)

Environmental Protection (Duty of Care) Regulations.

GUIDANCE NOTES

Introduction to Local Exhaust Ventilation HS(G)37.

CHIP for everyone HSG(108).

16 OTHER INFORMATION

REVISION COMMENTS

Comprehensive revision. REACH registration number(s) added.

REVISION DATE	20-Feb-13 - Rev 02: 0718
SDS NO.	10789

HAZARD STATEMENTS IN FULL

EUH066 Repeated exposure may cause skin dryness or cracking. , H225 Highly flammable liquid and vapour. , H319 Causes serious eye irritation. , H336 May cause drowsiness or dizziness.

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GRP POLISH

SAFETY DATA SHEET

GALTEC MASTERCLEAN

Compilation date: 09/09/2015

Revision No: 1

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

1.1. Product identifier

Product name: GALTEC MASTERCLEAN

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

Use of substance / mixture: PC35: Washing and cleaning products (including solvent based products).

1.3. Details of the supplier of the safety data sheet

Company name: Burgess Galvin & Co Limited

Jamestown Road

Finglas

Dublin 11

+353 (0) 1 8342255

Email: technical@burgessgalvin.ie

1.4. Emergency telephone number

Emergency tel: +353 (0) 1 8342255

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Skin Corr. 1A: H314

Most important adverse effects: Causes severe skin burns and eye damage.

2.2. Label elements

Label elements:

Hazard statements: H314: Causes severe skin burns and eye damage.

Signal words: Danger

Hazard pictograms: GHS05: Corrosion

Precautionary statements: P102: Keep out of reach of children.

P260: Do not breathe dust/fumes/gas/mist/vapours/spray.

P264: Wash skin thoroughly after handling.

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

P301+330+331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+361+353: IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water/shower.

P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

[cont...]

P305+351+338: 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/doctor/.
P363: Wash contaminated clothing before reuse.
P405: Store locked up.
P501: Dispose of contents/container to an approved waste disposal site.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

2-BUTOXYETHANOL

EINECS	CAS	PBT / WEL	CLP Classification	Percent
203-905-0	111-76-2	-	Acute Tox. 4: H332; Acute Tox. 4: H312; Acute Tox. 4: H302; Eye Irrit. 2: H319; Skin Irrit. 2: H315	3-10%

DISODIUM METASILICATE PENTAHYDRATE

-	229-912-9	-	Skin Corr. 1B: H314; STOT SE 3: H335; Met. Corr. 1: H290	1-3%

SODIUM XYLENESULPHONATE

-	1300-72-7	-	Eye Irrit. 2: H319	1-3%

ALCOHOLS C9-11, ETHOXYLATED

-	68439-45-2	-	Acute Tox. 4: H302; Eye Dam. 1: H318	1-3%

SODIUM HYDROXIDE

215-185-5	1310-73-2	-	Skin Corr. 1A: H314	1-3%

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Consult a doctor.

Eye contact: Rinse immediately with plenty of water also under the eyelids for at least 15 minutes. Consult a doctor.

Ingestion: Wash out mouth with water. Do not induce vomiting. Give 1 cup of water to drink every 10 minutes. Consult a doctor.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.

[cont...]

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

Skin contact: Irritation or pain may occur at the site of contact. Blistering may occur.

Eye contact: There may be irritation and pain. The eyes may water profusely. May cause permanent damage.

Ingestion: Corrosive burns may appear around the lips. Nausea and stomach pain may occur. Blood may be vomited.

Inhalation: There may be shortness of breath with a burning sensation in the throat. Exposure may cause coughing or wheezing.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

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

Immediate / special treatment: Eye bathing equipment should be available on the premises.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Corrosive. In combustion emits toxic fumes.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Do not attempt to take action without suitable protective clothing - see section 8 of SDS. Turn leaking containers leak-side up to prevent the escape of liquid.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS.

Section 7: Handling and storage

[cont...]

7.1. Precautions for safe handling

Handling requirements: Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area. Keep container tightly closed.

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Specific end use(s): PC35: Washing and cleaning products (including solvent based products).

Section 8: Exposure controls/personal protection

8.1. Control parameters

Hazardous ingredients:

SODIUM HYDROXIDE

Workplace exposure limits: **Respirable dust**

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
IE	2 mg/m3	2 mg/m3	-	-

DNEL/PNEC Values

DNEL / PNEC No data available.

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area.

Respiratory protection: Self-contained breathing apparatus must be available in case of emergency.

Hand protection: Gloves (alkali-resistant). PVC gloves. Nitrile gloves. Rubber gloves. Breakthrough time of the glove material > 8 hours.

Eye protection: Tightly fitting safety goggles. Ensure eye bath is to hand.

Skin protection: Alkali resistant protective clothing.

Environmental: No special requirement.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Colourless

Odour: Characteristic odour

Evaporation rate: No data available.

Oxidising: No data available.

Solubility in water: No data available.

Viscosity: Non-viscous

[cont...]

Boiling point/range°C:	No data available.	**Melting point/range°C:**	No data available.
Flammability limits %: lower:	No data available.	**upper:**	No data available.
Flash point°C:	No data available.	**Part.coeff. n-octanol/water:**	No data available.
Autoflammability°C:	No data available.	**Vapour pressure:**	No data available.
Relative density:	1.04 kg/l	**pH:**	13 - 14
VOC g/l:	No data available.		

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.

Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Heat.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Hazardous ingredients:

2-BUTOXYETHANOL

IVN	RAT	LD50	307	mg/kg
ORL	MUS	LD50	1230	mg/kg
ORL	RAT	LD50	470	mg/kg

DISODIUM METASILICATE PENTAHYDRATE

ORAL	RAT	LD50	1280	mg/kg

[cont...]

SODIUM XYLENESULPHONATE

DERMAL	RBT	LD50	>200	mg/kg
ORAL	RAT	LD50	>7000	mg/kg

SODIUM HYDROXIDE

IPR	MUS	LD50	40	mg/kg
ORL	RBT	LDLO	500	mg/kg

Relevant hazards for substance:

Hazard	Route	Basis
Skin corrosion/irritation	DRM	Hazardous: calculated
Serious eye damage/irritation	OPT	Hazardous: calculated

Symptoms / routes of exposure

Skin contact: Irritation or pain may occur at the site of contact. Blistering may occur.

Eye contact: There may be irritation and pain. The eyes may water profusely. May cause permanent damage.

Ingestion: Corrosive burns may appear around the lips. Nausea and stomach pain may occur. Blood may be vomited.

Inhalation: There may be shortness of breath with a burning sensation in the throat. Exposure may cause coughing or wheezing.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

Section 12: Ecological information

12.1. Toxicity

Hazardous ingredients:

DISODIUM METASILICATE PENTAHYDRATE

Daphnia magna	96H ErC50	216	mg/l
ZEBRAFISH (Brachydanio rerio)	96H LC50	210	mg/l

SODIUM XYLENESULPHONATE

DAPHNIA	48H EC50	>40.3	mg/l

12.2. Persistence and degradability

Persistence and degradability: Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

[cont...]

12.4. Mobility in soil

Mobility: Readily absorbed into soil.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: Negligible ecotoxicity.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

Disposal of packaging: Dispose of as normal industrial waste.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

14.1. UN number

UN number: N/A

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

14.5. Environmental hazards

Environmentally hazardous: No **Marine pollutant:** No

14.6. Special precautions for user

Special precautions: No special precautions.

Section 15: Regulatory information

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

Specific regulations: Safety Data Sheet prepared in accordance with REACH Commission Regulation (EU) No 453/2010 (which amends Regulation (EC) No 1907/2006). Ingredients are listed with classification under GHS/CLP- Regulation (EC) No 1272/2008 classification, labelling & packaging of substances & mixtures. Ingredients according to EC Detergents Regulation 648/2004 : Contains Sodium Hydroxide, Non Ionic Surfactants: <5%, EDTA and salts thereof <5%,

[cont...]

15.2. Chemical Safety Assessment

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and s.3: H290: May be corrosive to metals.

H302: Harmful if swallowed.

H312: Harmful in contact with skin.

H314: Causes severe skin burns and eye damage.

H315: Causes skin irritation.

H318: Causes serious eye damage.

H319: Causes serious eye irritation.

H332: Harmful if inhaled.

H335: May cause respiratory irritation.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.