

SAFETY DATA SHEET



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Version 1

Section 1: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product identifier

Product Name BUTANOX M-50

Other means of identification

UN Number UN3105

Recommended use of the chemical and restrictions on use

Recommended Use Recommended for Industrial and/or Professional use only

Details of manufacturer or importer

Manufacturer

Allnex Resins Australia Pty Ltd
49-61 Stephen Road
Botany, NSW 2019

For further information, please contact

Contact Point +61 (02) 9666 0331
E-mail address complianceANZ@allnex.com

Emergency telephone number

Emergency telephone number +61 1800 022 037

Section 2: HAZARD(S) IDENTIFICATION

Classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonised System (GHS)
Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG)

GHS Classification

Organic Peroxides	Type D
Acute toxicity - Oral	Category 4 - (H302)
Skin corrosion/irritation	Category 1 B - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)

Label elements



Signal word

Danger

Hazard statements

H242 - Heating may cause a fire
H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
AUH066 - Repeated exposure may cause skin dryness or cracking

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not breathe dust/fume/gas/mist/vapours/spray
 Wear protective gloves/protective clothing/eye protection/face protection
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 Keep/Store away from clothing/ combustible materials
 Keep only in original container

Precautionary Statements - Response

Immediately call a POISON CENTRE or doctor/physician
 Specific treatment (see supplemental first aid instructions on this label)
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a POISON CENTRE or doctor/physician
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 Wash contaminated clothing before re-use
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Immediately call a POISON CENTRE or doctor/physician
 IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell
 Rinse mouth
 Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up
 Store at temperatures not exceeding .?1 °C/ .?2 °F. Keep cool
 Store away from other materials
 Protect from sunlight

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other hazards

No hazard identified

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**Substance**

<u>Chemical Name</u>	<u>CAS No</u>	<u>Weight-%</u>
Dimethyl phthalate	131-11-3	100
Methyl ethyl ketone peroxide	1338-23-4	30-<60
Methyl ethyl ketone	78-93-3	10-<20

Section 4: FIRST AID MEASURES**Description of first aid measures**

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Emergency telephone number	Poisons Information Centre, Australia: 13 11 26
Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention. Get medical attention immediately if symptoms occur.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention. Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops

and persists. If skin irritation persists, call a doctor.

Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a doctor.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation.

Indication of any immediate medical attention and special treatment needed

Note to doctors Product is a corrosive material. Use of gastric lavage or emesis is contra-indicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

Section 5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray or fog is preferred; if water not available use dry chemical, CO₂ or regular foam. Flood fire area with water from a distance. Use water spray or fog; do not use straight streams. Move containers from fire area if you can do it without risk. Cool containers with flooding quantities of water until well after fire is out.

Unsuitable extinguishing media

Do not use water jetstream

Specific hazards arising from the chemical

These substances will accelerate burning when involved in a fire. Some may burn rapidly with flare burning effect. Some may decompose explosively when heated or involved in a fire. May ignite combustibles (wood paper, oil, clothing, etc.). Runoff may create fire or explosion hazard. Keep product and empty container away from heat and sources of ignition. The product causes irritation of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapours.

Special protective actions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. Oxidiser. May ignite combustibles (wood paper, oil, clothing, etc.). Some may burn rapidly with flare burning effect. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do it without risk. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible withdraw from area and let fire burn.

Hazchem code 2WE.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions

Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See section 8 for more information. Stop leak if you can do it without risk. DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST. Attention! Corrosive material. Use personal protective equipment as required.

Keep combustibles (wood, paper, oil, etc) away from spilled material. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

For emergency responders

Use personal protection recommended in Section 8.

Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Should not be released into the environment. Do not allow to enter into soil/subsoil.

Methods and material for containment and cleaning up**Methods for containment**

Prevent further leakage or spillage if safe to do so. Stop leak if you can do it without risk.

Methods for cleaning up

Cover liquid spill with sand, earth or other noncombustible absorbent material. Cover powder spill with plastic sheet or tarp to minimise spreading. Take up with inert, damp, non-combustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal. Flush area with flooding quantities of water. Prevent product from entering drains.

Precautions to prevent secondary hazards**Prevention of secondary hazards**

Clean contaminated objects and areas thoroughly observing environmental regulations.

Reference to other sections

See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

Precautions for safe handling**Advice on safe handling**

Use personal protection equipment. Avoid contact with skin, eyes or clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Use only with adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Take off contaminated clothing and wash before re-use.

General Hygiene Considerations

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feedingstuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection.

Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e. pilot lights, electric motors and static electricity). Keep in properly labelled containers. Do not store near combustible materials. Store in accordance with the particular national regulations. Store in accordance with local regulations. Keep out of the reach of children. Protect from moisture. Store locked up. Store away from other materials. Ambient transport organic peroxides

are recommended to be stored temperatures below 30C/ 86F to maintain product quality.

Incompatible materials

Organic material. Combustible material. Hydrocarbons. Strong acids. Strong bases. Strong oxidising agents.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits . This product, as supplied, contains hazardous materials with occupational exposure limits.

Chemical Name	Australia
Dimethyl phthalate 131-11-3	5 mg/m ³ TWA
Methyl ethyl ketone peroxide 1338-23-4	0.2 ppm Peak 1.5 mg/m ³ Peak
Methyl ethyl ketone 78-93-3	150 ppm TWA 445 mg/m ³ TWA 300 ppm STEL 890 mg/m ³ STEL

Biological occupational exposure limits An occupational medicine specialist familiar with national and regional regulations and standards must be consulted to establish a program of medical examinations for workers exposed to substances with biological limit values

Chemical Name	Australia	ACGIH	United Kingdom	European Union
Methyl ethyl ketone 78-93-3	-	MEK: 2 mg/L urine end of shift	70 µmol/L	

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection Gloves made of plastic or rubber. Suitable protective clothing.

Hand Protection Wear suitable gloves.

Respiratory protection Where respiratory protection is required, use a respirator selected and in accordance with AS/NZS 1715 and AS/NZS 1716.

Environmental exposure controls No information available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state liquid
Appearance clear
Colour colourless
Odour Slight
Odour threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	< 7	
Melting point / freezing point		No information available
Boiling point / boiling range		Not applicable
Flash point	No information available	No information available
Evaporation rate		No information available
Flammability (solid, gas)		No information available
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapour pressure		No information available
Vapour density		No information available
Relative density	1.17	@ 25 °C
Water solubility		Miscible
Solubility(ies)	-	No information available
Partition coefficient		No information available
Autoignition temperature		Not applicable
Decomposition temperature	60	SADT
Kinematic viscosity		No information available
Dynamic viscosity	25 mPa s	@ 20 °C
Explosive properties	No information available	
Oxidising properties	No information available	

Other Information

VOC Content (%)	No information available
Density	No information available

Section 10: STABILITY AND REACTIVITY**Reactivity**

No Data Available.

Chemical stability

Organic peroxide. MAY CAUSE FIRE.

Explosion data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge May be ignited by heat, sparks or flames.

Possibility of Hazardous Reactions**Possibility of Hazardous Reactions**

None under normal processing.

Conditions to avoid**Incompatible materials**

Organic material. Combustible material. Hydrocarbons. Strong acids. Strong bases. Strong oxidising agents.

Hazardous Decomposition Products

Self-accelerating decomposition may occur if the specific control temperature is not maintained. Decomposition products can include and are not limited to: Methyl ethyl ketone peroxide.

Section 11: TOXICOLOGICAL INFORMATION**Acute toxicity****Information on likely routes of exposure**

Product Information

Inhalation	Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal.
Eye contact	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes. Risk of serious damage to eyes.
Skin contact	Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns.
Ingestion	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document

Converted acute toxicity point estimates may have been used when only acute toxicity hazard classification is available.

ATEmix (oral)	873.00
ATEmix (dermal)	50,000.00
ATEmix (inhalation-vapour)	345.02
0% of the mixture consists of ingredient(s) of unknown toxicity	

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Dimethyl phthalate	= 6800 mg/kg (Rat)	-	-
Methyl ethyl ketone peroxide	= 470 mg/kg (Rat) = 407 mg/kg (Rat)	-	= 200 ppm (Rat) 4 h
Methyl ethyl ketone	= 2737 mg/kg (Rat) = 2483 mg/kg (Rat)	= 6480 mg/kg (Rabbit) = 5000 mg/kg (Rabbit)	= 11700 ppm (Rat) 4 h

See section 16 for terms and abbreviations

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation**

Classification based on data available for ingredients. Causes burns.

Serious eye damage/eye irritation

Classification based on individual ingredients of the mixture. Risk of serious damage to eyes. Causes burns.

Sensitisation

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

Reproductive toxicity

No information available.

STOT - single exposure

No information available.

STOT - repeated exposure

No information available.

Aspiration hazard

No information available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Unknown Aquatic Toxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Fish
Dimethyl phthalate	49.5 mg/L LC50 96 h Lepomis macrochirus 39 mg/L LC50 96 h Pimephales promelas flow-through 37 - 69 mg/L LC50 96 h Lepomis macrochirus static 100 - 220 mg/L LC50 96 h Leuciscus idus static 56 mg/L LC50 96 h Oncorhynchus mykiss flow-through 121 mg/L LC50 96 h Pimephales promelas static
Methyl ethyl ketone	3130 - 3320 mg/L LC50 96 h Pimephales promelas flow-through

Chemical Name	Crustacea
Dimethyl phthalate	33 mg/L EC50 48 h Daphnia magna
Methyl ethyl ketone	520 mg/L EC50 48 h Daphnia magna 4025 - 6440 mg/L EC50 48 h Daphnia magna Static 5091 mg/L EC50 48 h Daphnia magna

Chemical Name	Algae/aquatic plants
Dimethyl phthalate	142 mg/L EC50 96 h Pseudokirchneriella subcapitata static 20.6 - 45.8 mg/L EC50 96 h Pseudokirchneriella subcapitata 26.1 mg/L EC50 96 h Skeletonema costatum 28.4 - 71 mg/L EC50 72 h Pseudokirchneriella subcapitata 204 mg/L EC50 72 h Desmodesmus subspicatus

Persistence and degradability

No information available.

Bioaccumulative potential

Chemical Name	Partition coefficient
Dimethyl phthalate	2.12
Methyl ethyl ketone	0.29

Mobility

Mobility in soil

No information available.

Mobility

No information available.

Other adverse effects**Endocrine Disruptor Information**

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Endocrine disrupting potential
Dimethyl phthalate	Group III Chemical	-	-

Section 13: DISPOSAL CONSIDERATIONSWaste treatment methods

Waste from residues/unused products Refer to all federal, state and local regulations prior to disposal of container and unused contents by re-use, recycle or disposal.

Contaminated packaging Disposal should be in accordance with applicable regional, national and local laws and regulations. Observe all label precautions until container is cleaned, reconditioned or destroyed. Refer to all federal, state and local regulations prior to disposal of container and unused contents by re-use, recycle or disposal.

Section 14: TRANSPORT INFORMATIONADG

UN Number UN3105
Proper shipping name ORGANIC PEROXIDE TYPE D, LIQUID
Description UN3105, ORGANIC PEROXIDE TYPE D, LIQUID (METHYL ETHYL KETONE), 5.2
Hazard Class 5.2
Special Provisions 122, 274, 323
Hazchem code 2WE.
IERG 32

IMDG

UN/ID no UN3105
Proper shipping name Organic peroxide type D, liquid
Description UN3105, ORGANIC PEROXIDE TYPE D, LIQUID, 5.2
Hazard Class 5.2
EmS-No F-J, S-R
Special Provisions 122, 274

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
 No information available

IATA

UN/ID no UN3105
Proper shipping name Organic peroxide type D, liquid
Description UN3105, Organic peroxide type D, liquid (Methyl ethyl ketone), 5.2
Hazard Class 5.2
ERG Code 5L

Section 15: REGULATORY INFORMATIONSafety, health and environmental regulations/legislation specific for the substance or mixtureNational regulations**Australia**

Classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonised System (GHS).
 Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

See section 8 for national exposure control parameters

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Classified as a scheduled poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Poison Schedule Number S5

International Inventories

AICS - Australian Inventory of Chemical Substances	Listed or exempt
DSL - Canadian Domestic Substances List	Listed or exempt
IECSC - China Inventory of Existing Chemical Substances	Listed or exempt
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances	Listed or exempt
ENCS - Japan Existing and New Chemical Substances	Listed or exempt
KECL - Korean Existing and Evaluated Chemical Substances	Listed or exempt
NZIoC - New Zealand Inventory of Chemicals	Listed or exempt
PICCS - Philippines Inventory of Chemicals and Chemical Substances	Listed or exempt
CICR - Turkey Chemical Inventory Control Regulation	No information available
NCSR - Taiwan National Chemical Substance Registry	No information available
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory	Listed or exempt

For confirmation on the European REACH status contact the Nuplex Regional Compliance group for additional information

International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

Section 16: ANY OTHER RELEVANT INFORMATION

Revision Date 25-Nov-2016

Revision Note

The symbol (*) in the margin of this SDS indicates that this line has been revised.

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

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End of Safety Data Sheet