1. Identification

GHS Product Identifier: Butanox M-60
Product Code: 4317521
Company Name: IMCD Australia Limited (ABN 44 000 005 578)
Address: 1st Floor, 372 Wellington Road Mulgrave Victoria 3170 Australia
Telephone/Fax Number: Tel: (03)8544 3100 (Business hours) Fax: (03)8544 3299
Emergency phone number: 1800 625 526

Recommended use of the chemical and restrictions on use
Curing agent.

Additional Information
It is the user's responsibility to determine the suitability of this product for their applications and their methods of use.

2. Hazard Identification

GHS classification of the substance/mixture
Classified as hazardous according to criteria of NOHSC.

Eye Damage/Irritation: Category 1
Acute Toxicity - Inhalation: Category 4
Organic Peroxides: Type D
Acute Toxicity - Oral: Category 4
Skin Corrosion/Irritation: Category 1B

Hazard Statement(s)
H240 Heating may cause an explosion.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H331 Toxic if inhaled.

Pictogram(s)
Corrosion, Flame

Precautionary statement – Prevention
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P220 Keep away from dirt, rust, chemicals in particular.
P234 Keep only in original container.
P260 Do not breathe vapours.
P264 Wash hands and contaminated skin thoroughly after handling.
P270 Do no eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves eye/face protection and protective clothing.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P378 Use waterspray, foam, sand, dry-chemical powder or CO2 for extinction.
P403+P235 Store in a well-ventilated place. Keep cool.
P410 Protect from sunlight.

Precautionary statement – Response
P501 Dispose of contents and container according to local regulation.

3. Composition/information on ingredients

Composition, information on ingredients
Methyl ethyl ketone peroxide, solution in dimethyl phthalate.

Chemical Characterization Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS</th>
<th>Proportion</th>
<th>Hazard Symbol</th>
<th>Risk Phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Butanox M-60

**Product Name**

**Safety Data Sheet**

**Issue Date:** September 2012

**IMCDAST**

**Classified as hazardous**

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS Number</th>
<th>%</th>
<th>R</th>
<th>S</th>
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</thead>
<tbody>
<tr>
<td>Dimethyl phthalate</td>
<td>131-11-3</td>
<td>55-70%</td>
<td>R11</td>
<td>Xi</td>
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<tr>
<td>Methyl ethyl ketone</td>
<td>1338-23-4</td>
<td>30-39%</td>
<td>R36, R66, R67</td>
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</tr>
<tr>
<td>Peroxide</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methyl ethyl ketone</td>
<td>78-93-3</td>
<td>1-5%</td>
<td>R67</td>
<td></td>
</tr>
</tbody>
</table>

**4. First-aid measures**

**First Aid Measures**

- **Inhalation**
  - Call a physician immediately.
  - Remove to fresh air. If not breathing, give artificial respiration. Oxygen may additionally be given, by trained personnel, if it is available. Get medical attention immediately.

- **Ingestion**
  - Do not induce vomiting. Get medical attention immediately by calling a physician or a poison control centre. If victim is conscious and alert, give a cupful of water. Never give anything by mouth to an unconscious or convulsing person. If vomiting occurs, the patient should lie on their left side while vomiting to reduce the risk of aspiration.

- **Skin**
  - Immediately start continuous flushing of skin with water for at least 15 minutes, while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.

- **Eye contact**
  - Persons with pre-existing skin, eye or respiratory disease may be at increased risk from the irritant or allergic properties of this material. This material is severely corrosive to the eyes and may cause delayed keratitis. The normally prescribed 15 minute eye irrigation after exposure may be difficult because of the severe pain. The prior installation of a topical ocular anaesthetic is essential to facilitate a comprehensive ocular lavage. If swallowed, do not induce vomiting. Give patient plenty of water to drink. Ingestion of this corrosive material may result in severe ulceration, inflammation and possible perforation of the upper alimentary tract, with hemorrhage and fluid loss. Aspiration of this material during induced emeses can result in severe lung injury. Contact a Poison Control Centre for additional treatment information. Treat any additional effects symptomatically.

**Indication of immediate medical attention and special treatment needed if necessary**

- Harmful if swallowed. Causes burns. Causes injury to the cornea and eyelids.

**5. Fire-fighting measures**

**Fire Fighting Measures**

- Evacuate all non-essential personnel. Extinguish a small fire with powder or carbon dioxide then apply water to prevent re-ignition. Cool closed containers with water. Water used to extinguish a fire should not be allowed to enter the drainage system or water courses. After a fire, ventilate thoroughly the area and soak with water, clean the wall and metallic surfaces. Waterspray, alcohol-resistant foam, sand, dry chemical powder, CO2.

**Suitable extinguishing media**

- Halons.

**Hazards from Combustion Products**

- CAUTION: reignition may occur. Decomposition under effect of heating. If involved in a fire, it will support combustion. Vapours may form explosive mixtures with air. In case of fire and/or explosion do not breathe fumes. 2WE

**6. Accidental release measures**

**Protective equipment:** Firefighters must wear fire resistant protective equipment. Wear approved respirator and protective gloves.
Stop leakage if possible. Eliminate all sources of ignition and do not generate flames or sparks. Transfer remaining product from leaking container to a clean and suitable container. Cover the remainder with inert absorbent (e.g. vermiculite) for disposal. Keep contents moist. The waste should NOT be confined. Flush surroundings with large amounts of water and soap.

Do not breathe fumes/vapours. Avoid contact with the eyes. For personal protection, see section 8.

CAUTION: reignition may occur. Vapours are heavier than air and may spread along floors. Vapours may travel to a source of ignition and flash back. Evacuate personnel to safe area.

Never weigh out in the storage room. When using, do not eat, drink or smoke. Do not pipette by mouth. Do not breathe fumes/vapour. Handle in well ventilated areas. Eliminate all sources of ignition and do not generate flames or sparks. Keep away from reducing agents (e.g. amines), acids, alkalis and heavy metal compounds (e.g. accelerators, driers, metal soaps). Keep product and emptied containers away from heat and sources of ignition. Confinement must be avoided. Avoid contact with eyes. Avoid incompatible materials (See Section 10).

Fire and explosion prevention: Use explosion protected equipment. Keep away from sources of ignition - No smoking. Use non-sparking tools in areas where explosive vapour/air mixtures may occur. Do not cut or weld on or near this container even when empty.

For maximum quality, store below 25°C.

It is recommended to use electrical equipment of temperature group T3. However, autoignition can never be excluded. Wash hands thoroughly after handling or contact. Keep working clothing separately and do not take them home.

The following Australian and New Zealand Standards will provide general advice regarding safety clothing and equipment:
- Respiratory equipment: AS/NZS 1715,
- Protective Gloves: AS 2161,
- Industrial Clothing: AS2919,
- Industrial Eye Protection: AS1336 and AS/NZS 1337,
- Occupational Protective Footwear: AS/NZS2210.

Ensure good ventilation and local exhaustion of the working area. Explosion proof ventilation recommended.

In case of insufficient ventilation, wear suitable respiratory equipment. Wear eye/face protection. Wear suitable protective gloves of neoprene or synthetic rubber. Wear suitable protective clothing. Emergency shower and facilities for rinsing eyes must be accessible. Launder clothes before reuse.

Dimethylphthalate
Methyl ethyl ketone peroxide
Methyl ethyl ketone

<table>
<thead>
<tr>
<th>Name</th>
<th>STEL</th>
<th>TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethylphthalate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methyl ethyl ketone</td>
<td>1.5</td>
<td>0.2</td>
</tr>
<tr>
<td>Peroxide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methyl ethyl ketone</td>
<td>890</td>
<td>300</td>
</tr>
<tr>
<td>Footnote</td>
<td>Peak</td>
<td></td>
</tr>
</tbody>
</table>

Ensure good ventilation and local exhaustion of the working area. Explosion proof ventilation recommended.

Wear suitable protective clothing.

Emergency shower and facilities for rinsing eyes must be accessible. Launder clothes before reuse.
Product Name: Butanox M-60

Form: Liquid

Appearance: Colourless.

Odour: Faint.

Freezing Point: Solidifies at or below -10°C

Boiling Point: Not applicable - decomposes.

Solubility in Water: Partly miscible.

Solubility in Organic Solvents: Miscible with phthalates.

Specific Gravity: 1.17 at 20°C

pH: Slightly acidic.

Vapour Pressure: Not determined.

Vapour Density (Air=1): Not determined.

Coefficient Water/Oil Distr.: 25mPa.s at 20°C

Viscosity: Not determined.

Volatile Component: Above the SADT value.

Flash Point: Above the SADT value.

Flammability: Decomposition products may be flammable.

Auto-Ignition Temperature: Test methd not applicable (see Section 7).

Flammable Limits - Lower: Not determined.

Flammable Limits - Upper: Not determined.

Explosion Properties: No

Oxidising Properties: Not applicable.

Other Information: Active oxygen content: 9.8 - 10.0%

Peroxide content: 36%

SADT: 60°C See also Section 10

10. Stability and reactivity

Chemical Stability: 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 following temperature: 60°C. Contact with incompatible substances can cause decomposition at or below the SADT. To maintain quality store in original closed container below: 20°C. Confinement must be avoided.

Conditions to Avoid: Avoid contact with rust, iron and copper. Contact with incompatible materials such as acids, alkalies, heavy metals and reducing agents will result in hazardous decomposition. Do not mix with peroxide accelerators. Use only stainless steel 316, PP, polyethylene or glass-lined equipment.

Incompatible Materials: Acetic acid, formic acid, propanoic acid, methyl ethyl ketone.

Hazardous Decomposition Products: Will not occur.

Hazardous Polymerization: Will not occur.

11. Toxicological Information

Toxicology Information: No experimental toxicological data of the product as such available. The following data are applicable to the ingredient(s) listed below: Dimethyl phthalate:
Product Name: Butanox M-60

**Classified as hazardous**

| Oral LD50, rat: | >2400 mg/kg |
| Dermal LD50, rat: | >10000 mg/kg |
| Inhalation LC50, rat: | 9300 mg/m³ (6.5 hours) |
| Skin irritation: | Mildly irritating |
| Eye irritation: | Minimally irritating |
| Methyl ethyl ketone peroxide, 40% in Dimethyl phthalate: |
| Oral LD50, rat: | 1017 mg/kg |
| Dermal LD50, rat: | 4000 mg/kg |
| Inhalation LC50, rat: | 17 mg/l; 4 hours exposure time |
| Skin irritation: | Corrosive |
| Eye irritation: | Corrosive |
| Sensitisation: | Not sensitising |
| Genotoxicity: | Ames test: not mutagenic |
| Methyl ethyl ketone: |
| Oral LD50, rat: | 2737 mg/kg |
| Dermal LD50, rabbit: | 6480 mg/kg |
| Inhalation LC50, mouse: | 23500ppm |
| Skin irritation: | Moderately irritating |
| Eye irritation: | Moderately irritating |

### 12. Ecological information

**Ecological Information**

| Dimethyl phthalate: |
| LC50 Fish (Lepomis macrochirus), 96h: | 420 ppm |
| IC50 Algae (Selenastrum capricornutum), 96h: | 39.8 mg/l |
| Fate: Degradation Biotic - readily biodegradable |
| Bio Concentration Factor (BCF) fish 5.4 (24 hours) |
| Methyl ethyl ketone peroxide, 40% in Dimethyl phthalate: |
| LC50 Fish (Poecilia reticulata), 96h: | 44.2 mg/l |
| EC50 - Activated sludge respiration inhibition test = 48.0 mg/l |
| Fate: Degradation Biotic - readily biodegradable (closed bottle test) |
| Methyl ethyl ketone: |
| LC50 Fish (Lepomis macrochirus), 96h: | 3.22 g/l |
| Fate: Degradation Biotic - readily biodegradable |
| Naturally occurring substance. |

### 13. Disposal considerations

| Disposal Considerations |
| Dispose of waste according to applicable local, state and federal regulations. |
| Due to the high risk of contamination recycling/recovery is not recommended. Waste disposal in accordance with regulations (most probably controlled incineration). |
| According to local regulations. Emptied container might retain product residues. Follow all warnings even after the container is emptied. |

### 14. Transport information

| U.N. Number |
| 3105 |
| UN proper shipping name |
| ORGANIC PEROXIDE TYPE D, LIQUID - Methyl ethyl ketone peroxide |
| Transport hazard class(es) |
| 5.2 |
| Hazchem Code |
| 2WE |
| EPG Number |
| 5K1 |
| IERG Number |
| 32 |
| IMO Marine Pollutant |
| No. |
| IMDG EMS |
| F-J, S-R |
| Other Information |
| Dangerous Goods of Class 5.2 Organic Peroxides are incompatible in a placard load with any of the following: - Class 1, Class 2, Class 3, Class 4, Class 5.1, Class 7, Class 8, Fire risk substances and combustible liquids. |
Safety Data Sheet

Infosafe No™ IMCQH Issue Date: September 2012 ISSUED by IMCDAST

Product Name Butanox M-60

Classified as hazardous

15. Regulatory information

Poisons Schedule: S5
Symbol: C - Corrosive
O - Oxidising
Hazard Category: Harmful, Corrosive, Oxidising
AICS (Australia): All components of this material are listed on or exempt from the Australian Inventory of Chemical Substances (AICS).

16. Other Information

Other Information: ADG Code: Australian Code for the Transport of Dangerous Goods by Road and Rail, 7th Edition
AICS: Australian Inventory of Chemical Substances
ASCC: Office of the Australian Safety and Compensation Council
CAS number: Chemical Abstracts Service Registry Number
EPA: Environmental Protection Agency
Hazchem Code: Emergency action code of numbers and letters that provide information to emergency services especially fire fighters
IARC: International Agency for Research on Cancer
NICNAS: National Industrial Notification & Assessment Scheme
NIOSH: National Institute for Occupational Safety & Health
NOS: Not otherwise specified
NTP: National Toxicology Program (USA)
OSHA: Occupational Safety & Health Administration
PBT: Persistent Bioaccumulative Toxic chemical
PMCC: Pensky Martens Closed Cup
R-Phrase: Risk Phrase
STEL: Short Term Exposure Limit
SUSMP: Standard for the Uniform Scheduling of Medicines & Poisons
TWA: Time Weighted Average
UN Number: United Nations Number
vPvBL: Very Persistent and Very Bioaccumulative
WEEL: Workplace Environmental Exposure Level

THIS MSDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS MSDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS.

OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

...End Of MSDS...