# Material Safety Data Sheet (MSDS)

GM－O

## 1. Material and Company Identification

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| Product Name | GM-O |
| Product Code | |
| Company Name | Techno Chem Corporation |
| Address | 1-34 Shimo-cho, Omiya-ku, Saitama, Saitama 330-0844 |
| Phone Number | +81-48-795-8372 |
| Emergency Contact | +81-48-795-8372 |
| Uses | Industrial supplies (metal mold cleaner) |
| Creation Date | 11/27/2008 |
| Revision Date | 10/1/2009 |


## 2. Hazards Identification

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| Signal Words | DANGER! |
| Hazard Information | Extremly combustible, highly flammable aerosol<br>Highly flammable liquid and vapor<br>May be harmful if swallowed<br>Irritates skin<br>Severely irritating to eyes<br>May adversely affect fertility and fetuses<br>Organ failure (central nervous system, kidneys, systemic toxicity, repiratory system, liver)<br>May cause drowsiness or dizziness<br>Prolonged or repeated exposure causes organ failure (respiratory system, nervous system)<br>Prolonged or repeated exposure may cause organ failure (blood vessels, liver, pancreas)<br>May be harmful if swallowed and enters airways<br>Harmful to aquatic life<br>Harmful to aquatic life with long-term effects |

## 3. Information on Composition / Ingredients

Single component or mixture: Mixture

| Chemical Name | Content (wt%) | CAS.No. |
|---|---|---|
| Isopropyl alcohol | 20-30 | 67-63-0 |
| Xylene | 10-20 | 1330-20-7 (mixed)<br>95-47-6 (o－)<br>108-38-3 (m－)<br>106-42-3 (p－) |
| Ethyl acetate | 20-30 | 141-78-6 |
| Propane | - | 74-98-6 |
| n-Butane | 15-25 | 106-97-8 |
| Isobutane | 6-12 | 75-28-5 |

4. First Aid Measures

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| Eye: | Immediately flush eyes carefully with clean running water for several minutes. If wearing contacts, remove and clean them. If eye irritation persists, consult a physician. |
| Skin: | Flush the contacted skin immediately with soap and water. Remove all contaminated clothing and wash before reuse. If there are any abnormalities, consult a physician. |
| Inhalation: | Move to a location with fresh air and rest in position comfortable for breathing. If experiencing any discomfort or difficulty breathing, consult a physician immediately. |
| Ingestion: | Rinse mouth immediately. Induce vomiting, but tilt the body to keep vomit from entering the trachea. If there are any abnormalities, consult a physician. |

5. Fire Fighting Measures

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| Fire Fighting Procedure: | Spray or spread dry chemical, carbon dioxide or other extinguishing agent on the fire source to extinguish the fire. Using a foam extinguishing agent to cut off air is also effective. This is an aerosol product and can explode. Always wear protective equipment when extinguishing, maintain adequate distance and spray upwind from the fire.<br><br>Cool products exposed to high temperatures with water. Leaving products immersed in water can cause them to rust and explode, so remove quickly after cooling. |
| Extinguishing Media: | Dry chemical, carbon dioxide, foam, or dry sand |

6. Accidental Release Measures

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| Personal precautions, protective equipment and emergency measures: | Be careful that aerosol spray does not drift onto the body or into eyes. Ventilate well if using indoors. Wear gloves, a protective mask, goggles and other protective equipment when working, and be careful not to inhale any gases or vapors. |
| Environmental precautions: | Take care not to damage the environment by discharging into rivers or other bodies of water. |
| Containment and clean-up methods / equipment: | Stop leaks if not dangerous to do so. Ground all equipment when handling spilled material. |
| Secondary disaster prevention: | Remove all ignition sources immediately. Prevent inflow into drainage, sewerage or closed locations. |

7. Handling and Storage

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| Handling: | Do not use near fire or flames.<br>Do not use in large quantities indoors when flames are in use.<br>Do not expose to fire.<br>Discard when can is used up.<br>Follow all other specified product usage and precaution notes (using outdoors, etc.). |
| Storage: | Cans are at risk of rupturing if exposed to high temperatures. Do not leave in temperatures of 40°C or greater, such as under direct sunlight or near fire.<br>Do not leave around water or in humid places.<br>Do not leave within the reach of children. |

8. Exposure Controls / Personal Protection

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| Controlled concentrations: | Isopropyl alcohol: 200 ppm<br>Xylene: 50 ppm<br>Ethyl acetate: 200 ppm |
| Allowable concentrations: | |
| Japan Society for Occupational Health | Isopropyl alcohol: 400 ppm<br>Xylene: 50 ppm<br>Ethyl acetate: 200 ppm<br>n-Butane: 500 ppm |
| ACGIH | Isopropyl alcohol: 200 ppm (TLV-TWA), 400 ppm (TLV-STEL)<br>Xylene: 100 ppm (TLV-TWA), 150 ppm (TLV-STEL)<br>Ethyl acetate: 400 ppm (TLV-TWA)<br>n-Butane: 800 ppm<br>Propane: 1,000 ppm |
| Equipment measures: | When using in large quantity in indoor workplaces, install an explosion proof exhaust system to prevent vapor from accumulating. |
| Protective equipment: | Respiratory protection (organic gas mask) |
| Protective eyewear: | Goggles |
| Protective gloves: | Rubber gloves |
| Protective clothing: | With static protection |

9. Physical and Chemical Properties

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| Appearance: | Clear transparent liquid (undiluted) |
| Odor: | No data |
| pH: | No data |
| Melting point, freezing point: | No data |
| Boiling point, initial boiling point and boiling range: | No data |
| Flash point: | -4°C (ethyl acetate) |
| Explosive range: | Lower limit, 1.8% (propellant: butane)<br>Upper limit, 9.5% (propellant: propane) |
| Vapor pressure: | 0.35MPa (25°C) |
| Vapor density (atmosphere = 1): | No data |
| Specific gravity: | 0.839 (undiluted) |
| Solubility in water: | Insoluble in water |
| N-octanol-water partition coefficient | No data |
| Spontaneous ignition temperature: | No data |
| Decomposition temperature: | No data |

10. Stability and Reactivity

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| Chemical stability: | No data |
| Chemical reactivity: | Oxidation: none |
| Conditions to avoid: | Exposure to high temperatures |
| Incompatibility: | Avoid bringing in contact with acids and alkalies, as they could corrode the container. |

11. Toxicological Information

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| Acute toxicity: | Oral: Category 5 (value: 3852)<br>Dermal: not classified (value: 5578)<br>Inhalation (gas): not classified (value: 107125)<br>Inhalation (vapor): not classified (value: 70)<br>Inhalation (mist): no data |
| Skin corrosion/irritation: | Category 2 (15% comprised of category 2 substances) |
| Serious eye damage/eye irritation: | Category 2A (40.2% comprised of category 2A substances) |
| Respiratory and skin sensitization: | Respiratory sensitization: no data<br>Skin sensitization: no data |
| Germ cell mutagenicity: | No data |
| Carcinogenicity: | No data |
| Reproductive toxicity: | Category 1B (15% comprised of category 1B substances) |
| Specific target organ/systemic toxicity (single exposure): | Central nervous system, kidneys, systemic toxicity, respiratory system, liver: Category 1 (60% comprised of category 1 substances)<br>Anesthetic action: Category 3 (91.8% comprised of category 3 |
| Specific target organ/systemic toxicity (repeated exposure): | Respiratory system, nervous system: Category 1 (15% comprised of category 1 substances)<br>Blood vessels, liver, pancreas: Category 2 (25.2% comprised of category 2 substances) |
| Aspiration toxicity: | Category 2 (40.2% comprised of category 2 substances) |

12.Ecological Information

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| Acute aquatic environmental toxicity: | Category 3 (15% comprised of category 2 substances) |
| Chronic aquatic environmental toxicity: | Category 3 (15% comprised of category 2 substances) |
| Persistence/biodegradability: | No data |
| Bioaccumulation potential: | No data |
| Mobility in soil: | No data |

13. Disposal Considerations

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| Residual waste: | Small amounts: Go outdoors with no surrounding fires, press button until spraying noise stops and gas is emptied, and then dispose.<br>Large amounts: Contract with a licensed waste disposal company for waste disposal |
| Container and packaging: | Separate and dispose of according to the rules established by your municipality |

14. Transport Information

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| UN number: | 1950 |
| Class: | 2.1 |
| International regulations: | Maritime regulatory information: according to IMO regulations<br>Aviation regulatory information: according to ICAO/IATA regulations |
| National regulations: | Land transport regulatory information: according to Fire Service Act and High Pressure Gas Safety Act<br>Maritime regulatory information: according to Ship Safety Act<br>Aviation regulatory information: according to Civil Aeronautics Act |

15. Regulatory Information

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| High Pressure Gas Safety Act: | Aerosol |
| Fire Service Act: | Category IV, Class 1 petroleum; Hazard class II<br>(As an LPG, must report stored amounts exceeding 300 Kg) |
| PRTR Act: | Xylene (Class I Designated Chemical Substance No. 80) |
| Industrial Safety and Health Act: | Toxic substance to be noted<br><br>Hazardous material, flammable material<br>Class 2 organic solvents<br>Names and details of toxic substances to be displayed |
| Ship Safety Act: | Hazardous material (high pressure gas) |
| Civil Aeronautics Act: | High pressure gas |

16. Other Information

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| References: | Japan Advanced Information Center of Safety and Health, MSDS exhibit<br>(Isopropyl alcohol, xylene, ethyl acetate, propane, n-Butane)<br>GHS classification results, National Institute of Technology and Evaluation<br>(Isopropyl alcohol, xylene, ethyl acetate, propane, n-Butane) |

This data sheet is the latest information collected on safely handling this product under general circumstances, but is not perfect. It may be added to or revised if new information becomes available. Evaluate the safety before mixing this product with other products or using under special conditions. Values in this data sheet are not guaranteed.