|  |  |
| --- | --- |
| Metro Welding Supply Corp. logo | Safety Data Sheet  Nitrous Oxide |
|  |

# Section 1: Product and Company Identification

**Metro Welding Supply Corp.**

12620 Southfield Road
  
Detroit, MI 48223
  
(313) 834-1660 [phone]
  
(313) 835-3562 [fax]
  
http://www.metrowelding.com/

Product Code: Nitrous Oxide

# Section 2: Hazards Identification



**Danger**

## Hazard Classification:

Aspiration Hazard (Category 1)

Gases Under Pressure

Oxidizing Gas (Category 1)

## Hazard Statements:

Contains gas under pressure; may explode if heated

May be fatal if swallowed and enters airways

May cause or intensify fire; oxidizer

## Precautionary Statements

**Prevention:**

Keep reduction valves/valves and fittings free from oil and grease.

Keep and store away from clothing and combustible materials.

**Response:**

Do NOT induce vomiting.

If swallowed: Rinse mouth. Do NOT induce vomiting.

Immediately call a poison center or doctor.

In case of fire: Stop leak if safe to do so.

**Storage:**

Protect from sunlight.

Store in well-ventilated place.

Store locked up.

**Disposal:**

Dispose of contents and/or container in accordance with applicable regulations.

# Section 3: Composition/Information on Ingredients

| CAS # |
| --- |
| 10024-97-2 |

| Chemical Substance | Chemical Family | Trade Names |
| --- | --- | --- |
| NITROUS OXIDE | inorganic, gas | DINITROGEN MONOXIDE; FACTITIOUS AIR; LAUGHING GAS; HYPONITROUS ACID ANHYDRIDE; NITROGEN (I) OXIDE; NITROGEN OXIDE; STCC 4904340; UN 1070; NITROGEN OXIDE (N2O); DINITROGEN OXIDE; NITROUS OXIDE, COMPRESSED; N2O |

# Section 4: First Aid Measures

| Skin Contact | Eye Contact | Ingestion | Inhalation | Note to Physicians |
| --- | --- | --- | --- | --- |
| If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105-115 F; 41-46 C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blankets. Get immediate medical attention. | Flush eyes with plenty of water. | If a large amount is swallowed, get medical attention. | If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention. | For inhalation, consider oxygen. |

# Section 5: Fire Fighting Measures

| Suitable Extinguishing Media | Products of Combustion | Protection of Firefighters |
| --- | --- | --- |
| Non-flammable. Use suitable extinguishing media for surrounding fire. | Non-flammable | * Non-flammable |

# Section 6: Accidental Release Measures

| Personal Precautions | Environmental Precautions | Methods for Containment |
| --- | --- | --- |
| Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering. Avoid contact with combustible materials. | No adverse effects expected. | Stop leak if possible without personal risk. |

| Methods for Cleanup | Other Information |
| --- | --- |
| Stop leak, evacuate and ventilate area. | None |

# Section 7: Handling and Storage

| Handling | Storage |
| --- | --- |
| Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.105. | Keep separated from incompatible substances. |

# Section 8: Exposure Controls/Personal Protection

| Exposure Guidelines |
| --- |
| NITROUS OXIDE: 50 ppm ACGIH TWA 25 ppm (46 mg/m3) NIOSH recommended TWA (halogenated anesthetic gas) |

## Engineering Controls

Handle only in fully enclosed systems.

| Eye Protection | Skin Protection | Respiratory Protection |
| --- | --- | --- |
| For the gas: Eye protection not required, but recommended. For the liquid: Wear splash resistant safety goggles. Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area. | For the gas: Protective clothing is not required. For the liquid: Wear appropriate protective, cold insulating clothing. | Non-flammable |

## General Hygiene considerations

* Avoid breathing vapor or mist
* Avoid contact with eyes and skin
* Wash thoroughly after handling and before eating or drinking

# Section 9: Physical and Chemical Properties

| Physical State | Appearance | Color | Change in Appearance | Physical Form | Odor | Taste |
| --- | --- | --- | --- | --- | --- | --- |
| Gas | Clear | Colorless | N/A | Gas | Sweet odor | Sweet taste |

| Flash Point | Flammability | Partition Coefficient | Autoignition Temperature | Upper Explosive Limits | Lower Explosive Limits |
| --- | --- | --- | --- | --- | --- |
| Not flammable | Not available | Not available | Nonflammable | Nonflammable | Nonflammable |

| Boiling Point | Freezing Point | Vapor Pressure | Vapor Density | Specific Gravity | Water Solubility | pH | Odor Threshold | Evaporation Rate | Viscosity |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -128 F (-89 C) | -132 F (-91 C) | 760 mmHg @ -88 C | 1.53 (Air=1) | Not applicable | 59% @ 25 C | Not applicable | Not available | Not applicable | 0.0145 cP @ 25 C |

| Molecular Weight | Molecular Formula | Density | Weight per Gallon | Volatility by Volume | Volatility | Solvent Solubility |
| --- | --- | --- | --- | --- | --- | --- |
| 44.01 | N2-O | 1.8122 g/L @ 25 C | Not available | Not applicable | Not applicable | Soluble: Sulfuric acid, alcohol, alkali solutions, ether, oils |

# Section 10: Stability and Reactivity

| Stability | Conditions to Avoid | Incompatible Materials |
| --- | --- | --- |
| Stable at normal temperatures and pressure. Decomposes to nitrogen and oxygen at high temperatures | Stable at normal temperatures and pressure. Decomposes to nitrogen and oxygen at high temperatures | Combustible materials, metals, bases, reducing agents, peroxides, metal salts, metal oxides, hydrogen |

| Hazardous Decomposition Products | Possibility of Hazardous Reactions |
| --- | --- |
| Oxides of nitrogen | Will not polymerize. |

# Section 11: Toxicology Information

## Acute Effects

| Oral LD50 | Dermal LD50 | Inhalation |
| --- | --- | --- |
| Not available | Not available | Nausea, vomiting, symptoms of drunkenness, hyperactivity or drowsiness, hearing loss, suffocation, death |

| Eye Irritation | Skin Irritation | Sensitization |
| --- | --- | --- |
| Liquid: frostbite, blurred vision | Liquid: blisters, frostbite | Potentially fatal if inhaled, central nervous system depression, difficulty breathing TERATOGEN/EMBRYOTOXIN - can harm the unborn child, based on human information. |

## Chronic Effects

| Carcinogenicity | Mutagenicity | Reproductive Effects | Developmental Effects |
| --- | --- | --- | --- |
| IARC: Human Inadequate Evidence, Animal Inadequate Evidence, Group 3 (Anesthetics, volatile); ACGIH: A4 -Not Classifiable as a Human Carcinogen | Available. | Available. | No data |

# Section 12: Ecological Information

## Fate and Transport

|  |  |  |  |
| --- | --- | --- | --- |
| Eco toxicity | Persistence / Degradability | Bioaccumulation / Accumulation | Mobility in Environment |
| Fish toxicity: Not available  Invertibrate toxicity: Not available  Algal toxicity: Not available  Phyto toxicity: Not available  Other toxicity: Not available | Not available | Not available | Not available |

# Section 13: Disposal Considerations

|  |
| --- |
| Dispose in accordance with all applicable regulations. |

# Section 14: Transportation Information

## U.S. DOT 49 CFR 172.101

| Proper Shipping Name | ID Number | Hazard Class or Division | Packing Group | Labeling Requirements | Passenger Aircraft or Railcar Quantity Limitations | Cargo Aircraft Only Quantity Limitations | Additional Shipping Description |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Nitrous oxide | UN1070 | 2.2 | Not applicable | 2.2; 5.1 | N/A | N/A | N/A |

## Canadian Transportation of Dangerous Goods

|  |  |  |  |
| --- | --- | --- | --- |
| Shipping Name | UN Number | Class | Packing Group / Risk Group |
| Nitrous oxide | UN1070 | 2.2; 5.1 | Not applicable |

# Section 15: Regulatory Information

## U.S. Regulations

|  |  |  |
| --- | --- | --- |
| CERCLA Sections | SARA 355.30 | SARA 355.40 |
| Not regulated. | Not regulated. | Not regulated. |

## SARA 370.21

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Acute | Chronic | Fire | Reactive | Sudden Release |
| Yes | No | No | No | Yes |

## SARA 372.65

|  |
| --- |
| Not regulated. |

## OSHA Process Safety

|  |
| --- |
| Not regulated. |

## State Regulations

|  |
| --- |
| CA Proposition 65 |
| Not regulated. |

## Canadian Regulations

|  |
| --- |
| WHMIS Classification |
| A,C |

## National Inventory Status

|  |  |  |
| --- | --- | --- |
| US Inventory (TSCA) | TSCA 12b Export Notification | Canada Inventory (DSL/NDSL) |
| Listed on inventory. | Not listed. | Not determined. |

# Section 16: Other Information

|  |
| --- |
| NFPA Rating |
| HEALTH=1 FIRE=0 REACTIVITY=0 |

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard