



Glacier Ozone
PO Box 348
Auburn, WA 98071

MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT IDENTIFICATION: OZONE

CHEMICAL FORMULA: O₃
SYNONYMS: TRIATOMIC OXYGEN
CHEMICAL FAMILY: GASEOUS OXIDANT
CAS NO.: 10028-15-6
NIOSH: RTECS RS8225000
MANUFACTURER: GLACIER OZONE
PHONE NUMBER: 253-737-8003

SECTION 2: COMPOSITION & PHYSICAL DATA:

MOLECULAR WEIGHT: 48.0 g/mole
SPECIFIC GRAVITY: 2.144 g/L
RELATIVE GAS DENSITY: 1.66
IONIZATION POTENTIAL: 12.52eV
MELTING POINT: -192.5°C
BOILING POINT: -111.9°C
VAPOR PRESSURE: > 1 atm
WATER SOLUBILITY: 0.001% (0°C) APPEARANCE AND ODOR: CLEAR TO BLUISH GAS WITH SHARP, PUNGENT ODOR. OZONE IS HEAVIER THAN AIR.

SECTION 3: HEALTH HAZARD DATA:

THRESHOLD LIMIT VALUE (TLV)/TIME WEIGHTED AVERAGE (TWA):
OSHA PEL/NIOSH REL: 0.1 ppm (0.2 mg/m³) 8-hr/day, 40hr/week
OSHA/NIOSH STEL: 0.3 ppm (0.6mg/m³ 15-min)
OSHA/NIOSH IDLH: 5 ppm (10mg/m³)
WARNING PROPERTIES: ODOR THRESHOLD IS DETECTIBLE IN THE 0.01 TO 0.04 PPM RANGE AND IS TREATED AS A MATERIAL WITH ADEQUATE WARNING PROPERTIES. EFFECTS OF OVER EXPOSURE: IRRITATION OF NOSE AND THROAT AND MAY CAUSE, SHORTNESS OF BREATH AND/OR COUGHING, HEADACHES, FATIGUE, DROWSINESS, AND INFLAMMATION OF UPPER RESPIRATORY TRACT.

SECTION 4: FIRST AID MEASURES:

INHALATION: REMOVE FROM AIR CONTAINING OZONE, INTO AREA WITH FRESH AIR. IF BREATHING IS DIFFICULT, A TRAINED PERSON SHOULD ADMINISTER OXYGEN.

SECTION 5: FIRE AND EXPLOSION HAZARD DATA:

OZONE IS MOST OFTEN GENERATED FROM AIR AT CONCENTRATIONS OF 1-2% BY WEIGHT. AT THESE CONCENTRATIONS OZONE IS NON-EXPLOSIVE.
FLASH POINT: N/D
AUTO IGNITION TEMP: N/D
UPPER AND LOWER FLAMMABLE LIMITS IN AIR: N/D

SECTION 6: ACCIDENTAL RELEASE:

EVACUATE AREA AND OPEN DOORS AND WINDOWS AND ALLOW AREA TO VENTILATE. OZONE IS UNSTABLE GAS AND DECOMPOSES TO OXYGEN WITHIN MINUTES TO HOURS.

SECTION 7: REACTIVITY DATA:

STABILITY: UNSTABLE. SLOWLY DECOMPOSES TO OXYGEN FROM WHICH IT WAS MADE.
CONDITIONS TO AVOID: CONCENTRATING OZONE TO LEVELS (>20%) WHERE ITS REACTIVITY AND RATE OF DECOMPOSITION ACCELERATES.
INCOMPATIBILITY: OZONE IS CHEMICALLY REACTIVE WITH ALL OXIDIZABLE MATERIALS, BOTH ORGANIC AND INORGANIC.

SECTION 8: PROTECTION & PRECAUTIONS:

VENTILATION: GENERAL EXHAUST RECOMMENDED. INJECT FRESH AIR. AVOID WORKING IN OZONE GENERATING AREAS UNLESS OZONE LEVELS ARE BELOW PEL/TLV.
RESPIRATORY: RESPIRATORS MAY BE USED WHEN WORK PRACTICE CONTROLS ARE NOT TECHNICALLY FEASIBLE. USE NIOSH APPROVED RESPIRATOR.

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