



Precautionary statement(s)

Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
 P264 Wash hands and exposed skin thoroughly after handling.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

P302+P352 IF ON SKIN: Wash with plenty of water/soap
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
 P332+P313 If skin irritation occurs: Get medical advice/attention.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P370+P378 In case of fire: Use foam/C02 to extinguish.

Storage

P403+P235 Store in a well ventilated place. Keep cool.

Disposal

P501 Dispose of contents/container to local, state, and federal regulations

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Component	Concentration
ISOPROPANOL (CAS no.: 67-63-0; EC no.: 200-661-7; Index no.: 603-117-00-0)	< 5 % (Weight)
CLASSIFICATIONS: Flammable liquids (chapter 2.6), Cat. 2; Eye damage/irritation (chapter 3.3), Cat. 2; Specific target organ toxicity, single exposure (chapter 3.8), Cat. 3. HAZARDS: H225 - Highly flammable liquid and vapor; H319 - Causes serious eye irritation; H336 - May cause drowsiness or dizziness.	
ETHYLENE GLYCOL MONOBUTYL ETHER (CAS no.: 111-76-2; EC no.: 203-905-0; Index no.: 603-014-00-0)	< 20 % (Weight)
CLASSIFICATIONS: Acute toxicity, oral (chapter 3.1), Cat. 4; Flammable liquids (chapter 2.6), Cat. 4; Acute toxicity, dermal (chapter 3.1), Cat. 4; Skin corrosion/irritation (chapter 3.2), Cat. 2; Eye damage/irritation (chapter 3.3), Cat. 2A; Acute toxicity, inhalation (chapter 3.1), Cat. 4. HAZARDS: No data available.	
MORPHOLINE (CAS no.: 110-91-8; EC no.: 203-815-1; Index no.: 613-028-00-9)	< 2 % (Weight)
CLASSIFICATIONS: Acute toxicity, dermal (chapter 3.1), Cat. 3; Acute toxicity, inhalation (chapter 3.1), Cat. 3; Acute toxicity, oral (chapter 3.1), Cat. 4; Eye damage/irritation (chapter 3.3), Cat. 1; Flammable liquids (chapter 2.6), Cat. 3; Hazardous to the aquatic environment - acute hazard (chapter 4.1), Cat. 3. HAZARDS: H226 - Flammable liquid and vapor; H302 - Harmful if swallowed; H311 - Toxic in contact with skin; H318 - Causes serious eye damage; H331 - Toxic if inhaled; H402 - Harmful to aquatic life.	

Trade secret statement (OSHA 1910.1200(i))

The specific chemical identities of the ingredients in this mixture are considered to be trade secrets and are withheld in accordance with the provisions of 1910.1200 of the code of federal regulations

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).



If inhaled	Do not use mouth-to-mouth method if victim 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. Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Get medical attention if artificial oxygen is administered.
In case of skin contact	In case of contact with substance, immediately flush skin with running water for at least 20 minutes. For minor skin contact, avoid spreading material on unaffected skin. Remove and isolate contaminated clothing and shoes. Call 911 or emergency medical service.
In case of eye contact	In case of contact with substance, immediately flush eyes with running water for at least 15 minutes.
If swallowed	If swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, give two glasses of water to drink. DO NOT INDUCE VOMITING. Never induce vomiting or give liquids to someone who is unconscious, having convulsions, or unable to swallow. Seek immediate medical attention.
Personal protective equipment for first-aid responders	See Section 8 for exposure and PPE recommendations

4.2 Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of immediate medical attention and special treatment needed, if necessary

There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Any material aspirated during vomiting may cause lung injury. Therefore, emesis should not be induced mechanically or pharmacologically. If it is considered necessary to evacuate the stomach contents, this should be done by means least likely to cause aspiration (such as: Gastric lavage after endotracheal intubation).

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

LARGE FIRE: Water spray, fog or regular foam.

SMALL FIRES: Dry chemical, CO2, water spray or regular foam.

Unsuitable Extinguishing No data available

5.2 Specific hazards arising from the chemical

Unusual Fire and Explosion Hazards - I Heat builds up pressure in closed containers. Cool with water stream. Toxic fumes and vapors may be produced.

Hazardous Combustion Products I Carbon dioxide, carbon monoxide, acrid smoke, irritating fumes.

5.3 Special protective actions for fire-fighters



Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present. Water spray may be ineffective on fire but can protect fire-fighters & cool closed containers. Use fog nozzles if water is used. Do not enter confined fire-space without full bunker gear. (Helmet with face shield, bunker coats, gloves & rubber boots). Use NIOSH approved positive-pressure self-contained breathing apparatus. Firefighting Instructions: Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible. Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Runoff from fire control may cause pollution.

LARGE FIRES: Dike fire-control water for later disposal

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂).

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate enclosed areas.

6.2 Environmental precautions

Avoid run off to waterways and sewers.

6.3 Methods and materials for containment and cleaning up

Absorb spilled liquid with polypads or other suitable absorbent materials. If necessary, neutralize using suitable buffering material, (acid with soda ash or base with phosphoric acid), and test area with litmus paper to confirm neutralization. Clean up with non-combustible absorbent (such as: sand, soil, and so on). Shovel up and place all spill residue in suitable containers. dispose of at an appropriate waste disposal facility according to current applicable laws and regulations and product characteristics at time of disposal (see Section 13 - Disposal Considerations).

Reference to other sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Isolate from oxidizers, heat, & open flame. Use only with adequate ventilation. Avoid or repeated breathing of vapor or spray mist. Do not get in eyes, on skin or clothing. Wear OSHA Standard goggles. Consult Safety Equipment Supplier. Wear goggles, gloves. Wash clothing before reuse. Do not flame cut, braze, or weld drums. Empty drum containers are very hazardous! Continue all label precautions!

7.2 Conditions for safe storage, including any incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use.

Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: None classified.

Specific end use(s)

Window/glass Cleaner

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****CAS: 110-91-8**

Morpholine

Cal/OSHA: 20 ppm, (ST) 30 ppm PEL inhalation; NIOSH: 20 ppm, (ST) 30 ppm REL inhalation; OSHA: 20 ppm PEL inhalation; 70 mg/m³ PEL inhalation**CAS: 111-76-2**

2-Butoxyethanol

Cal/OSHA: 20 ppm PEL inhalation; NIOSH: 5 ppm REL inhalation; OSHA: 50 ppm PEL inhalation; 240 mg/m³ PEL inhalation

ETHYLENE GLYCOL MONOBUTYL ETHER

OSHA: dermal

CAS: 67-63-0

Isopropyl alcohol

Cal/OSHA: 400 ppm, (ST) 500 ppm PEL inhalation; NIOSH: 400 ppm, (ST) 500 ppm REL inhalation; OSHA: 400 ppm PEL inhalation; 980 mg/m³ PEL inhalation**8.2 Appropriate engineering controls**

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Consumer Exposure Controls: Do not eat, drink or smoke during use.

8.3 Individual protection measures, such as personal protective equipment (PPE)**Pictograms****Eye/face protection**

Chemical goggles or safety glasses.

Skin protection

Wear suitable protective clothing.

Body protection

Wear suitable protective clothing.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

Environmental exposure controls

Do not allow the product to be released into the environment.

SECTION 9: Physical and chemical properties



Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	liquid
Odor	ALCOHOL/AMINE –ODOR
Odor threshold	No data available.
pH	No data available.
Melting point/freezing point	10f
Initial boiling point and boiling range	200-265 DEG. F
Flash point	141f
Evaporation rate	No data available.
Flammability (solid, gas)	No data available.
Upper/lower flammability limits	No data available.
Vapor pressure	20EC=1.1
Vapor density	No data available.
Relative density	>0.800-0.850(@20 DEG. C)
Solubility(ies)	Soluble in water
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	No data available.
Explosive properties	No data available.
Oxidizing properties	No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Hazardous reactions will not occur under normal conditions.

10.2 Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3 Possibility of hazardous reactions

May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

10.4 Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Incompatible materials.

10.5 Incompatible materials

Strong acids. Strong bases. Strong oxidizers.

10.6 Hazardous decomposition products

Carbon Monoxide, Carbon Dioxide from burning.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

ETHYLENE GLYCOL MONOBUTYL ETHER

LD50 Oral - Guinea pig - 1400 mg/kg



Citation: DOW Chemical rev. date: 04/21/2015

ETHYLENE GLYCOL MONOBUTYL ETHER

LD50 Oral - Rat - 1300 mg/kg

Citation: DOW Chemical rev. date: 04/21/2015

ETHYLENE GLYCOL MONOBUTYL ETHER

LD50 Skin - Guinea pig - >2000 mg/kg

Citation: DOW Chemical rev. date: 04/21/2015

ETHYLENE GLYCOL MONOBUTYL ETHER

LC50 Inhalation - Guinea pig - >3.1 mg/l - 1hr

Result: No deaths occurred at this value

Remarks: vapor

Citation: DOW Chemical rev. date: 04/21/2015

ISOPROPANOL

LC50 Inhalation - Rat - 45248 ppm - 1hr

Citation: AIRGAS rev. date: 5/20/2015

ISOPROPANOL

LD50 Skin - Rabbit - 12800 mg/kg

Citation: AIRGAS rev. date: 5/20/2015

ISOPROPANOL

LD50 Oral - Rat - 5000 mg/kg

Citation: AIRGAS rev. date: 5/20/2015

Skin corrosion/irritation

ISOPROPANOL

Skin - Rabbit - 500mg

Result: Mild irritant

Citation: AIRGAS rev. date: 5/20/2015

Serious eye damage/irritation

ISOPROPANOL

Eyes - Rabbit - 100mg - 24hr

Result: Moderate irritant

Citation: AIRGAS rev. date: 5/20/2015

Respiratory or skin sensitization

ETHYLENE GLYCOL MONOBUTYL ETHER

Result: Did not cause allergic skin reactions when tested in humans.

Did not cause allergic skin reactions when tested in guinea pigs.

Citation: DOW Chemical rev. date: 04/21/2015

Germ cell mutagenicity

No data available.



Carcinogenicity

No data available.

Reproductive toxicity

No data available.

Summary of evaluation of the CMR properties

No data available.

STOT-single exposure

ISOPROPANOL

Result: Category 3: Narcotic effects

Citation: AIRGAS rev. date: 5/20/2015

STOT-repeated exposure

No data available.

Aspiration hazard

No data available.

Additional information

No data available.

SECTION 12: Ecological information

Toxicity

ETHYLENE GLYCOL MONOBUTYL ETHER

LC50 - Oncorhynchus mykiss (rainbow trout) - 1474 mg/l - 96hr

Result: Acute Toxicity

Remarks: OECD Test guideline 203

Citation: DOW Chemical rev. date: 04/21/2015

ETHYLENE GLYCOL MONOBUTYL ETHER

EC50 - Daphnia magna (water flea) - 1550 mg/l - 48hr

Result: Acute Toxicity

Remarks: OECD Test guideline 203

Citation: DOW Chemical rev. date: 04/21/2015

ETHYLENE GLYCOL MONOBUTYL ETHER

EbC50 - Pseudokirchneriella subcapitata (green algae) - 911 mg/l - 72hr

Result: Acute Toxicity: Biomass

Citation: DOW Chemical rev. date: 04/21/2015

ETHYLENE GLYCOL MONOBUTYL ETHER

IC50 - Bacteria - >1000 mg/l

Result: Acute Toxicity: Growth inhibition

Citation: DOW Chemical rev. date: 04/21/2015

ETHYLENE GLYCOL MONOBUTYL ETHER



NOEC - Danio rerio (zebra fish) - >100 mg/l - 21days
Result: Chronic Toxicity
Citation: DOW Chemical rev. date: 04/21/2015

ETHYLENE GLYCOL MONOBUTYL ETHER
NOEC - Daphnia magna (water flea) - >100 mg/l - 21days
Result: Chronic Toxicity
Citation: DOW Chemical rev. date: 04/21/2015

ISOPROPANOL
LC50 - Crustaceans - Crangon crangon - 1400000 to 1950000 µg/l - 48hr
Citation: AIRGAS rev. date: 5/20/2015

ISOPROPANOL
LC50 - Fish - Rasbora heteromorpha - 4200 mg/l - 96hr
Citation: AIRGAS rev. date: 5/20/2015

Persistence and degradability

No data available.

Bioaccumulative potential

ETHYLENE GLYCOL MONOBUTYL ETHER
OECD

Result: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

10-day Window: Pass

Biodegradation: 90.4 %

Exposure time: 28 d

Method: OECD Test Guideline 301B or Equivalent

Theoretical Oxygen Demand: 2.30 mg/mg

Citation: DOW Chemical rev. date: 04/21/2015

ETHYLENE GLYCOL MONOBUTYL ETHER
OECD

Result: Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water(log Pow): 0.81 Measured

Bioconcentration factor (BCF): 3.2

Citation: DOW Chemical rev. date: 04/21/2015

ISOPROPANOL

LogPow - 0.05

Result: Potential: low

Mobility in soil

ETHYLENE GLYCOL MONOBUTYL ETHER

Result: Potential for mobility in soil is high (Koc between 50 and 150).

Partition coefficient(Koc): 67 Estimated.

Citation: DOW Chemical rev. date: 04/21/2015



Results of PBT and vPvB assessment

No data available.

Other adverse effects

No data available.

SECTION 13: Disposal considerations

Disposal of the product

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations

Disposal of contaminated packaging

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations

Waste treatment

Do not allow product to enter sewars or drains. Prevent runoff.

Sewage disposal

Sewage Disposal Recommendations: This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: Transport information

14.1 UN Number	1993
14.2 UN Proper Shipping Name	Combustible liquid, n.o.s. (contains: 2-Ethoxybutanol),
14.3 Transport hazard class(es)	3
14.4 Packing group	III

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not DOT regulated on trucks in containers of < 119 gallons

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Massachusetts Right To Know Components

Chemical name: Isopropyl alcohol (mfg-strong acid process)

CAS number: 67-63-0

New Jersey Right To Know Components

Common name: ISOPROPYL ALCOHOL

CAS number: 67-63-0

Common name: 2-BUTOXY ETHANOL

CAS number: 111-76-2



Common name: MORPHOLINE
CAS number: 110-91-8

Pennsylvania Right To Know Components

Chemical name: 2-Propanol
CAS number: 67-63-0

Chemical name: Ethanol, 2-butoxy-
CAS number: 111-76-2

Chemical name: Ammonium hydroxide
CAS number: 1336-21-6

Chemical name: Morpholine
CAS number: 110-91-8

SARA 311/312 Hazards

Chemical name: 2-Propanol
CAS number: 67-63-0.....Fire hazard, Immediate (Acute) health hazard

Chemical name: Ethanol, 2-butoxy-
CAS number: 111-76-2....Acute Health Hazard, Fire Hazard, Chronic Health Hazard

SARA 313 Components

Chemical name: 2-Propanol
CAS number: 67-63-0.....Form R - Reporting requirements

Chemical name: Ethanol, 2-butoxy-
CAS number: 111-76-2

Toxic Substances Control Act (TSCA) Inventory

Chemical name: Ethanol, 2-butoxy-
CAS number: 111-76-2.....Compliant

CERCLA

5000 LBS 107-15-3 ethylenediamine
100 LBS 100-74-3; 110-91-8
4-ethylmorpholine; morpholine

California Prop. 65 Components

Chemical name: Morpholine
CAS number: 110-91-8:

WARNING: THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

SECTION 16: Other information

Revision Date:
05/03/2017

Other Information:

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Party Responsible for the Preparation of This Document



Overspray

SAFETY DATA SHEET

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

North America GHS US 2012