

Reaction:
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses if present and easy to do. continue rinsing.

Hazardous components which must be listed on the label:

CAS	111-76-2	2-Butoxyethanol
CAS	78-83-1	2-Methylpropan-1-ol

Other hazards ---

Further information ---

3 Composition/Information on Ingredients

Mixtures

Mixture of solvents in aerosol can

Chemical Name	CAS-No.	EC No.	Registration Number	Classification (67/548/EEC)	Classification (REGULATION (EC) No. 1272/2008)	Conc.(wt%)
2-Butoxyethanol	111-76-2	203-905-0	01-2119475108-36-XXXX	Xn; R 20/21/22, 36/38	Acute Tox. 4; H312 Acute Tox. 4; H332 Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Irrit. 2; H319	1-5
1-Methoxy-2-propanol	107-98-2	203-539-1	01-2119457435-35-XXXX	R10 R67	Flam. Liq. 3; H226 STOT SE 3; H336	1-5
2-Methylpropan-1-ol	78-83-1	201-148-0	01-2119484609-23-XXXX	R10 Xi; R37/38, 41 R67	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H335 STOT SE 3; H336	1-5
Ethanol	64-17-5	200-578-6	01-2119457610-43-XXXX	F; R11	Flam. Liq. 2; H225	1-5
Dimethyl ether	115-10-6	204-065-8	01-2119472128-37-XXXX	F+; R12	Press.Gas Flam. Gas 1; H220	50-60

For the full text of the R-phrases mentioned in this section, see section 16.

For the full text of the H-statements mentioned in this section, see section 16.

4 First-Aid measures

[If in Eyes]

- Wash eyes with plenty of water and in case of persistence of irritation, get medical attention.

[If on Skin]

- Wash with plenty of soap and water, and get medical attention immediately.

[If Inhaled]

- If feel unwell because of inhalation, remove to fresh air and keep at rest in a position comfortable for breathing, and call a physician.

[If Swallowed]

- Call a physician immediately.

5 Fire-Fighting measures

Suitable extinguishing media Water[] CO2[*] Foam[*] Dry chemical[*] Dry sand[*]

Fire fighting method

- Wear proper protective clothes such as heat insulating clothes/gloves/face shield and/or eye protection.
- Use specified extinguishing media.
- Remove combustible material from surrounding area.
- Start fire fighting from windward
- Do not use water as the extinguishing media.

6 Accidental release measures

- Avoid contact with skin. Wear appropriate protective equipment (protective gloves, eye/face protection, apron and long sleeved clothes) when handling spill of this product.
- Wear protective equipment and collect spillage into air-tight container that can be tightly closed. Move the container to a safe place.
- Dispose contaminant and waste in accordance with regulations relative to disposal.
- Eliminate all ignition sources such as heat, sparks, open flames and combustible materials.
- Provide appropriate extinguisher to prepare for fire.
- Do not use steel tools as it may cause impact sparks. Tool should be static free.
- Absorb with dry sand, earth or noncombustible material. In case of large spill, hold back with earth to prevent spreading.
- Avoid release to rivers to prevent effect to environment.

7 Handling and storage

[Cautions on Handling]

- May cause poisoning if on skin or inhaled.
- Keep away from ignition sources such as heat/sparks/open flame, and ventilate work area when handling this product.
- Ventilate work area to prevent inhalation of vapor/fume/spray/dust.
- Avoid contact with skin. Wear protective gloves, eye/face protection and long sleeved clothes if necessary.
- If spilled or leaked, wipe with cloth and discard contaminated materials into a container which is filled with water.
- Dip contaminated cloth, spray dust and/or mist into water until they are discarded properly.
- After use, wash hands and gargle mouth thoroughly.
- Do not use this product other than the purpose specified by the manufacturer/supplier.

[Cautions on Storage]

- Keep container tightly closed. Store in cool and ventilated indoor place. Protect from direct sun light.
- Keep reach out of children.
- Keep away from flame or heat sources.

8 Exposure Controls/Personal Protection

[Facilities Recommendation]

- All facilities should be explosion proof.
- Prevent vapor from retention by installation of a proper ventilator.
- Ground/bond container or receiving equipment for transportation, mixing and/or transferring of this product.
- Do not locate heat/flame generating facilities close to the work area.
- If spray indoor, install coating facilities so that workers are protected from direct exposure to spray mist, or install adequate ventilation.
- For handling in closed tanks, install appropriate ventilator which secures ventilation to the bottom of the tank.

[Protective Equipments]

- Respiratory Protection: Wear gas mask for organic gas. Wear self-contained breathing apparatus in case of operation in closed areas.
- Eye Protection: Wear goggle type of eye protection.
- Skin Protection: Wear appropriate gloves which is impervious to organic solvents and chemicals.
- Other Protection: Work clothes specified by the manufacturer or supplier, and safety shoes.

Substance	CAS No.	Exposure Limit Value			
		Short Term		Eight Hours	
		EU	AGS&DFG Germany	EU	AGS&DFG Germany
2-Butoxyethanol	111-76-2	50PPM	(A/D)80/20PPM	20PPM	(A/D)20/10PPM
1-Methoxypropan-2-ol	107-98-2	150PPM	200PPM	100PPM	100PPM
2-Methylpropan-1-ol	78-83-1		100PPM		100PPM
Ethanol	64-17-5		1000PPM		500PPM
Dimethyl ether	115-10-6		8000PPM	1000PPM	1000PPM

9 Physical and Chemical Properties

Physical appearance

Color: Colorless/Clear

Form: Aerosol/Liquid

Odor: Product-specific

Additional data

Change of state:	Pressure of gas is immediately ejected gas. Sprayed solvents evaporate quickly.
Boiling point/ range:	N.A.(Not applicable)
Flash point:	N.A.
Flammability:	Spray and evaporative gases are extremely flammable
Ignition temperature:	N.A.
Auto ignition:	No
Oxidizing properties:	The case of overheating
Explosion danger:	Overheating rupture/bursting of the container formation of explosive mixtures are possible.
Explosion limits:	N.A.
Vapour pressure inside the dispenser:	at 50°C maximum 2/3 of maximum pressure allowed for the dispenser
Density, here: apparent density at 20°C:	0.850g/cm ³
Solubility in water:	Yes
Solvent content:	30-50%

More details: The finished preparation in the aerosol dispenser only upon the addition of the pressurized gas. Details are in the hermetically sealed under pressure not measurable container.

10 Stability and Reactivity

[Reactivity Information]

- Materials to be avoided: Keep away from strong oxides and/or peroxides that will cause polymerization and/or generate heat or fire by mixing or contact.
- Hazardous thermal decomposition products: CO, CO₂, HCl, vapors of solvents.
- Other reactivity information: None.

11 Toxicological Information

Health Hazard Information on Ingredient Table 1

Substance name	Acute toxicity (LD50, LC50, etc.)				
	Oral	Dermal	Inhalation (Gas)	Inhalation (Vapor)	Inhalation (Dust, Mist)
2-Propanol	Category 5	Category 5	Not Applicable	Not Categorized	Not Classifiable
	3437mg/kg	4059mg/kg			
Ethanol, 2-butoxy-	Category 4	Category 2	Not Applicable	Category 2	Not Classifiable
	1746mg/kg	135mg/kg		450ppm	
Silicon dioxide	Category 5	Not Classifiable	Not Applicable	Not Classifiable	Not Classifiable
	3160mg/kg				
2-Propanol, 1-methoxy-	Not Categorized	Not Categorized	Not Applicable	Not Classifiable	Not Classifiable
	5113mg/kg				
isobutyl alcohol	Category 5	Category 5	Not Applicable	Not Categorized	Not Classifiable
	2596mg/kg	2523mg/kg			
Ethanol	Not Categorized	Not Classifiable	Not Applicable	Not Categorized	Not Categorized
	> 5000mg/kg				

Health Hazard Information on Ingredient Table 2

Substance name	Skin Corrosion · Irritation	Serious Damage to Eyes /Eye Irritation	Respiratory Sensitization	Skin Sensitization	Germ Cell Mutagenicity	Carcinogenicity
2-Propanol	Not Categorized	Category 2A-2B	Not Classifiable	Not Classifiable	Not Categorized	Not Categorized
Ethanol, 2-butoxy-	Category 2	Category 2A	Not Classifiable	Not Categorized	Not Categorized	Not Categorized
Silicon dioxide	Not Classifiable	Not Classifiable	Not Classifiable	Not Classifiable	Not Classifiable	Not Categorized
2-Propanol, 1-methoxy-	Category 3	Category 2A-2B	Not Classifiable	Not Classifiable	Not Categorized	Not Classifiable
isobutyl alcohol	Category 2	Category 2A	Not Classifiable	Not Classifiable	Not Categorized	Not Classifiable
Ethanol	Not Categorized	Category 2A-2B	Not Classifiable	Not Classifiable	Category 1B	Not Categorized

Health Hazard Information on Ingredient Table 3

Substance name	Reproductive toxicity	Specific Target Organ (Single Exposure)
2-Propanol	Category 2	Category 1(Central nervous system, Kidney, Systemic toxicology) Category 3(Respiratory tract irritation)
Ethanol, 2-butoxy-	Category 2	Category 1(Central nervous system, Blood, Kidney, Liver) Category 3(Respiratory tract irritation)
Silicon dioxide	Not Classifiable	Not Classifiable
2-Propanol, 1-methoxy-	Not Categorized	Category 3(Narcotic action)
isobutyl alcohol	Not Categorized	Category 3(Respiratory tract irritation, Narcotic action)
Ethanol	Category 1A	Category 3(Respiratory tract irritation, Narcotic action)

Health Hazard Information on Ingredient Table 4

Substance name	Specific Target Organ (Repeat Exposure)	Aspiration Respiratory Toxicity
2-Propanol	Category 2(Blood vessel, Liver, Spleen)	Category 2
Ethanol, 2-butoxy-	Category 2(Blood)	Not Applicable
Silicon dioxide	Not Classifiable	Not Classifiable
2-Propanol, 1-methoxy-	Not Categorized	Not Classifiable
isobutyl alcohol	Not Categorized	Category 2
Ethanol	Category 1(Liver) Category 2(Nerve)	Not Classifiable

12 Ecological information

Aqueous Milieu Hazard Information on Ingredient

Substance name	Hazardous to Aquatic Environment (Acute)	Hazardous to Aquatic Environment (Chronic)
2-Propanol	Not Categorized	Not Categorized
Ethanol, 2-butoxy-	Category 2	Not Categorized
Silicon dioxide	Not Classifiable	Not Classifiable
2-Propanol, 1-methoxy-	Not Categorized	Not Categorized

isobutyl alcohol	Not Categorized	Not Categorized
Ethanol	Not Categorized	Not Categorized

13 Disposal Considerations

- Content should be used up before disposal of container.
- Container/content should be disposed in accordance with local, regional and national regulations.

14 Transport Information

General Information:	Follow general instructions described in the "Precautions on Handling and Storage".
Ground Transportation:	Transportation must be done in accordance with the appropriate regulations in case this product falls under a category of regulations such as Fire Service Law (Japan), Industrial Safety and Health Law (Japan), etc.
Marine Transportation:	Comply stipulation of appropriate maritime regulations.
Air Transportation:	Comply stipulations of appropriate air transportation regulations.
UN Number:	1950

15 Regulatory Information

Particular hazards associated with the preparation and safety recommendations:

16 Other Information

Full text risk of R-phrases referred to under sections 2 and 3:

- R10: Flammable
- R11: Highly flammable
- R12: Extremely flammable
- R20/21/22: Harmful by inhalation, in contact with skin and if swallowed
- R36/38: Irritating to eyes and skin
- R37/38: Irritating to respiratory system and skin
- R41: Risk of serious damage to eyes
- R67: Vapours may cause drowsiness and dizziness

Full text risk of H-statemens referred to under sections 2 and 3:

- H220: Extremely flammable gas
- H222: Extremely flammable aerosol
- H225: Highly flammable liquid and vapour
- H226: Flammable liquid and vapour
- H229: Pressurized container: may burst if heated
- H302: Harmful if swallowed
- H312: Harmful in contact with skin
- H315: Causes skin irritation
- H318: Causes serious eye damage
- H319: Causes serious eye irritation
- H332: Harmful if inhaled
- H335: May cause respiratory irritation
- H336: May cause drowsiness or dizziness
- EUH066: Repeated exposure may cause skin dryness or cracking

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Parts of the Safety Data Sheet marked with red line have been updated.