AkzoNobel

SAFETY DATA SHEET

Dulux Weatheshield Powerflexx

Section 1. Product and company identification

GHS product identifier : Dulux Weatheshield Powerflexx

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Product use : Use in accordance with directions on the can.

Details of the supplier of the safety data sheet

Akzo Nobel Pakistan Limited,
PO Box No. 273
346 Ferozepur Road,
Lahore 54600,
Tel: +92-42-35918585
Fax : +92 42 3583 5011
www.dulux.com.pk
Customer Care: 0800-38589

e-mail address of person responsible for this SDS : customer.contactcentre@AkzoNobel.com

Emergency telephone number

Telephone number : 0800-38589 (Office Hours)
+92 300 8427360 (Off-office Hours)
+92 300 8711653 (Off-office Hours)

Version : 1

Date of previous issue : No previous validation

Section 2. Hazards identification

Skin Sens. 1, H317
Aquatic Chronic 3, H412

Ingredients of unknown toxicity : 0%

Ingredients of unknown ecotoxicity : 0%

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : H317 - May cause an allergic skin reaction.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Section 2. Hazards identification

General : P102 - Keep out of reach of children.
P101 - If medical advice is needed, have product container or label at hand.

Prevention : P280 - Wear protective gloves.
P273 - Avoid release to the environment.
P261 - Avoid breathing vapour.

Response : P362 + P364 - Take off contaminated clothing and wash it before reuse.
P302 + P352 - IF ON SKIN: Wash with plenty of water.
P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.

Storage : Not applicable.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national or international regulations.

Hazardous ingredients : 2-octyl-2H-isothiazol-3-one
1,2-benzisothiazol-3(2H)-one
2-methyl-2H-isothiazol-3-one
C(M)IT/MIT(3:1)

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of first aid measures

General : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.

Eye contact : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.

Ingestion : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Most important symptoms and effects, both acute and delayed

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.
Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption

Section 4. First aid measures

through the skin.
If splashed in the eyes, the liquid may cause irritation and reversible damage.
Ingestion may cause nausea, diarrhea and vomiting.
This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Contains 2-octyl-2H-isothiazol-3-one, 1,2-benzisothiazol-3(2H)-one, 2-methyl-2H-isothiazol-3-one, C(M)IT/MIT(3:1). May produce an allergic reaction.

Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media : Recommended: alcohol-resistant foam, CO_2, powders, water spray.

Unsuitable extinguishing media : Do not use water jet.

Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Hazardous combustion products : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

Advice for firefighters

Special protective actions for fire-fighters : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

Special protective equipment for fire-fighters : Appropriate breathing apparatus may be required.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

Methods and material for containment and cleaning up : Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Preferably clean with a detergent. Avoid using solvents.

Section 6. Accidental release measures

Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

Section 7. Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling : Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits.
In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.
Mixture may charge electrostatically: always use earthing leads when transferring from one container to another.
Operators should wear antistatic footwear and clothing and floors should be of the conducting type.
Keep away from heat, sparks and flame. No sparking tools should be used.
Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Put on appropriate personal protective equipment (see Section 8).
Never use pressure to empty. Container is not a pressure vessel.
Always keep in containers made from the same material as the original one.
Comply with the health and safety at work laws.
Do not allow to enter drains or watercourses.
Information on fire and explosion protection
Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.
Notes on joint storage
Keep away from: oxidising agents, strong alkalis, strong acids.
Additional information on storage conditions
Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

Section 8. Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

Control parameters

Occupational exposure limits

Section 8. Exposure controls/personal protection

Product/ingredient name	Exposure limit values
n-butyl acrylate	**EU OEL (Europe, 10/2019). Notes: list of indicative occupational exposure limit values** TWA: 2 ppm 8 hours. TWA: 11 mg/m³ 8 hours. STEL: 10 ppm 15 minutes. STEL: 53 mg/m³ 15 minutes.
ethanediol	**EU OEL (Europe, 10/2019). Absorbed through skin. Notes: list of indicative occupational exposure limit values** TWA: 20 ppm 8 hours. TWA: 52 mg/m³ 8 hours. STEL: 40 ppm 15 minutes. STEL: 104 mg/m³ 15 minutes.
2-(2-methoxyethoxy)ethanol	**EU OEL (Europe, 10/2019). Absorbed through skin. Notes: list of indicative occupational exposure limit values** TWA: 50.1 mg/m³ 8 hours. TWA: 10 ppm 8 hours.
Methyl methacrylate	**EU OEL (Europe, 10/2019). Notes: list of indicative occupational exposure limit values** TWA: 50 ppm 8 hours. STEL: 100 ppm 15 minutes.
2-methoxyethanol	**EU OEL (Europe, 10/2019). Absorbed through skin. Notes: list of indicative occupational exposure limit values** TWA: 1 ppm 8 hours.
2-ethoxyethanol	**EU OEL (Europe, 10/2019). Absorbed through skin. Notes: list of indicative occupational exposure limit values** TWA: 8 mg/m³ 8 hours. TWA: 2 ppm 8 hours.
2-methoxyethanol	**EU OEL (Europe, 10/2019). Absorbed through skin. Notes: list of indicative occupational exposure limit values** TWA: 1 ppm 8 hours.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
1-isopropyl-2,2-dimethyltrimethylene diisobutyrate	DNEL	Long term Oral	18.8 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	18.8 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	31.2 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	32.6 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	110 mg/m³	Workers	Systemic
diuron (ISO)	DNEL	Long term Inhalation	0.17 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	5.79 mg/	Workers	Systemic

Section 8. Exposure controls/personal protection

			kg bw/day		
bronopol (INN)	DNEL	Long term Oral	0.35 mg/kg bw/day	General population	Systemic
	DNEL	Short term Oral	1.1 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	1.2 mg/m³	General population	Systemic
	DNEL	Short term Inhalation	1.3 mg/m³	General population	Local
	DNEL	Long term Inhalation	1.3 mg/m³	General population	Local
	DNEL	Long term Dermal	1.4 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	2.3 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	3.7 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	4.1 mg/m³	Workers	Systemic
	DNEL	Short term Dermal	4.2 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	4.2 mg/m³	Workers	Local
	DNEL	Long term Inhalation	4.2 mg/m³	Workers	Local
	DNEL	Short term Dermal	7 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	12.3 mg/m³	Workers	Systemic
n-butyl acrylate	DNEL	Long term Inhalation	11 mg/m³	Workers	Local
ethanediol	DNEL	Long term Inhalation	7 mg/m³	General population	Local
	DNEL	Long term Inhalation	35 mg/m³	Workers	Local
	DNEL	Long term Dermal	53 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	106 mg/kg bw/day	Workers	Systemic
2-(2-methoxyethoxy)ethanol	DNEL	Long term Dermal	1.33 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	2.22 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Oral	7.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	30.1 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	50.1 mg/m³	Workers	Systemic
Methyl methacrylate	DNEL	Long term Dermal	8.2 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	13.67 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	74.3 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	104 mg/m³	General population	Local
	DNEL	Long term Inhalation	208 mg/m³	Workers	Local
	DNEL	Long term Inhalation	208 mg/m³	Workers	Systemic
2-methoxyethanol	DNEL	Long term Oral	0.55 mg/kg bw/day	General population	Systemic

Section 8. Exposure controls/personal protection

	DNEL	Long term Dermal	0.91 mg/ kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	3.2 mg/m³	Workers	Systemic
2-ethoxyethanol	DNEL	Long term Inhalation	83 µg/m³	Workers	Systemic
	DNEL	Long term Dermal	0.3 mg/kg bw/day	Workers	Systemic
2-methoxyethanol	DNEL	Long term Oral	0.55 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.91 mg/ kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	3.2 mg/m³	Workers	Systemic

PNECs

No PNECs available

Exposure controls

Appropriate engineering controls : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Use safety eyewear designed to protect against splash of liquids.

Skin protection

When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time >480 minutes according to EN374) is recommended.
Recommended gloves: Viton ® or Nitrile, thickness ≥ 0.38 mm.
When only brief contact is expected, a glove with protection class of 2 or higher (breakthrough time >30 minutes according to EN374) is recommended.
Recommended gloves: Nitrile, thickness ≥ 0.12 mm.
Gloves should be replaced regularly and if there is any sign of damage to the glove material.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

Body protection : Personnel should wear antistatic clothing made of natural fibres or of high-temperature-resistant synthetic fibres.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.

OLD LEAD-BASED PAINTS:

When surfaces are to be prepared for painting, account should be taken of the age of the property and the possibility that lead-pigmented paint might be present. There is a possibility that ingestion or inhalation of scrapings or dust arising from the preparation work could cause health effects. As a working rule you should assume that this will be the case if the age of the property is pre 1960.

Section 8. Exposure controls/personal protection

Where possible wet sanding or chemical stripping methods should be used with surfaces of this type to avoid the creation of dust. When dry sanding cannot be avoided, and effective local exhaust ventilation is not available, it is recommended that a dust respirator is worn, that is approved for use with lead dusts, and its type selected on the basis of the COSHH assessment, taking into account the Workplace Exposure Limit for lead in air. Furthermore, steps should be taken to ensure containment of the dusts created, and that all practicable measures are taken to clean up thoroughly all deposits of dusts in and around the affected area.

Respiratory protection in case of dust or spray mist formation. (particle filter EN143 type P2) Respiratory protection in case of vapour formation. (half mask with combination filter A2-P2 til concentrations of 0,5 Vol%.)

The current Control of Lead at Work Regulations approved code of practice should be consulted for advice on protective clothing and personal hygiene precautions. Care should also be taken to exclude visitors, members of the household and especially children from the affected area, during the actual work and the subsequent clean up operations. All scrapings, dust, etc. should be disposed of by the professional painting contractor as Hazardous Waste.

Extra precautions will also need to be taken when burning off old lead-based paints because fumes containing lead will be produced. It is recommended that a respirator, approved for use with particulate fumes of lead is selected on the basis of the COSHH assessment, taking into account the Workplace Exposure Limit for lead in air. Similar precautions to those given above about sanding should be taken with reference to protective clothing, disposal of scrapings and dusts, and exclusion of other personnel and especially children from the building during actual work and the subsequent clean up operations.

Avoid the inhalation of dust. Wear suitable face mask if dry sanding. Special precautions should be taken during surface preparation of pre-1960s paint surfaces over wood and metal as they may contain harmful lead.

Environmental exposure controls : Do not allow to enter drains or watercourses.

Section 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state : Liquid.

Colour : Various: See label.

Odour : Not available.

Odour threshold : Not available.

pH : 9

Melting point/freezing point : Not available.

Initial boiling point and boiling range : 100°C

Flash point : Not applicable.

Evaporation rate : Not available.

Upper/lower flammability or explosive limits : Not available.

Vapour pressure : Not available.

Vapour density : Not available.

Relative density : 1.446

Solubility(ies) : Easily soluble in the following materials: cold water.

Partition coefficient: n-octanol/water : Not available.

Section 9. Physical and chemical properties

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): 7.61 cm^2/s
Kinematic (40°C): 2.01 cm^2/s

Explosive properties : Not available.

Oxidising properties : Not available.

9.2. Other information

Solubility in water : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : Stable under recommended storage and handling conditions (see Section 7).

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : When exposed to high temperatures may produce hazardous decomposition products.

Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.

Hazardous decomposition products : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

Section 11. Toxicological information

Information on toxicological effects

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.
Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.
If splashed in the eyes, the liquid may cause irritation and reversible damage.
Ingestion may cause nausea, diarrhea and vomiting.
This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Contains 2-octyl-2H-isothiazol-3-one, 1,2-benzisothiazol-3(2H)-one, 2-methyl-2H-isothiazol-3-one, C(M)IT/MIT(3:1). May produce an allergic reaction.

Acute toxicity

Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
IPBC	LD50 Oral	Rat	1470 mg/kg	-
n-butyl acrylate	LC50 Inhalation Gas.	Rat	2730 ppm	4 hours
	LD50 Oral	Rat	900 mg/kg	-
ethanediol	LD50 Intraperitoneal	Rat	5010 mg/kg	-
	LD50 Intravenous	Rat	3260 mg/kg	-
	LD50 Oral	Rat	4700 mg/kg	-
	LD50 Route of exposure unreported	Rat	13 g/kg	-
	LD50 Subcutaneous	Rat	2800 mg/kg	-
2-(2-methoxyethoxy)ethanol	LD50 Dermal	Rabbit	2500 uL/kg	-
	LD50 Intraperitoneal	Mouse	2611 mg/kg	-
	LD50 Intraperitoneal	Rat	2722 mg/kg	-
	LD50 Oral	Guinea pig	4160 mg/kg	-
	LD50 Oral	Mouse	8222 mg/kg	-
	LD50 Oral	Rabbit	7190 mg/kg	-
	LD50 Oral	Rat	4 mL/kg	-
2-ethoxyethanol	LD50 Dermal	Rabbit	3.6 g/kg	-
	LD50 Dermal	Rat	3900 mg/kg	-
	LD50 Intraperitoneal	Mouse	1710 mg/kg	-
	LD50 Intraperitoneal	Mouse	1707 mg/kg	-
	LD50 Intraperitoneal	Rat	2800 mg/kg	-
	LD50 Intravenous	Mouse	3900 mg/kg	-
	LD50 Intravenous	Rabbit	900 mg/kg	-
	LD50 Intravenous	Rat	2400 mg/kg	-
	LD50 Oral	Guinea pig	1.4 g/kg	-
	LD50 Oral	Guinea pig	1400 mg/kg	-
	LD50 Oral	Guinea pig	950 mg/kg	-
	LD50 Oral	Mouse	4000 mg/kg	-
	LD50 Oral	Mouse	2451 mg/kg	-
	LD50 Oral	Mouse	2451 mg/kg	-
	LD50 Oral	Rabbit	1275 mg/kg	-
	LD50 Oral	Rabbit	1275 mg/kg	-
	LD50 Oral	Rat	3 g/kg	-
	LD50 Oral	Rat	2125 mg/kg	-
	LD50 Oral	Rat	3527 mg/kg	-
	LD50 Oral	Rat	8103 mg/kg	-
	LD50 Oral	Rat	2460 mg/kg	-
	LD50 Oral	Rat	2125 mg/kg	-
	LD50 Route of exposure unreported	Guinea pig	3070 mg/kg	-
	LD50 Route of exposure unreported	Mouse	5799 mg/kg	-
	LD50 Route of exposure unreported	Rat	7750 mg/kg	-
	LD50 Subcutaneous	Rabbit	2 g/kg	-
	LD50 Subcutaneous	Rat	3400 mg/kg	-
	LDLo Oral	Human	143 mg/kg	-
	LDLo Subcutaneous	Mouse	5 g/kg	-
	TDLo Oral	Rat	1000 mg/kg	-
	TDLo Oral	Woman - Female	0.8 mL/kg	-
2-methoxyethanol	LD50 Dermal	Rabbit	1280 mg/kg	-
	LD50 Dermal	Rabbit	2000 mg/kg	-
	LD50 Intraperitoneal	Mouse	2147 mg/kg	-
	LD50 Intraperitoneal	Rat	2500 mg/kg	-
	LD50 Intravenous	Rat	2068 mg/kg	-
	LD50 Oral	Guinea pig	950 mg/kg	-
	LD50 Oral	Mouse	2560 mg/kg	-
	LD50 Oral	Mouse	2800 mg/kg	-
	LD50 Oral	Rabbit	890 mg/kg	-

Section 11. Toxicological information

	LD50 Oral	Rabbit	890 mg/kg	-
	LD50 Oral	Rat	2370 mg/kg	-
	LD50 Oral	Rat	2460 mg/kg	-
	LDLo Oral	Human	3380 mg/kg	-
	LDLo Oral	Human	143 mg/kg	-
	TDLo Intraperitoneal	Rat	50 mg/kg	-
	TDLo Intraperitoneal	Rat	150 mg/kg	-
	TDLo Oral	Guinea pig	200 mg/kg	-
	TDLo Oral	Guinea pig	300 mg/kg	-
	TDLo Oral	Rat	250 mg/kg	-
	TDLo Oral	Rat	200 mg/kg	-
	TDLo Oral	Rat	150 mg/kg	-
	TDLo Oral	Rat	200 mg/kg	-
	TDLo Oral	Rat	2000 mg/kg	-
	TDLo Oral	Rat	50 mg/kg	-

Conclusion/Summary : Not available.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
diuron (ISO)	500	N/A	N/A	N/A	N/A
bronopol (INN)	500	1100	N/A	N/A	N/A
IPBC	500	N/A	700	3	N/A
n-butyl acrylate	N/A	N/A	2730	N/A	N/A
OIT	100	300	N/A	N/A	0.05
methylisothiazolinone	100	300	N/A	0.5	N/A
ethanediol	500	N/A	N/A	N/A	N/A
2-methoxyethanol	500	1100	N/A	11	N/A
2-ethoxyethanol	500	N/A	N/A	3	N/A
2-methoxyethanol	500	1100	N/A	11	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
1-isopropyl-2,2-dimethyltrimethylene diisobutyrate	Skin - Mild irritant	Guinea pig	-	5 gm	-
	Skin - Mild irritant	Human	-	504 hours 1 % I	-
bronopol (INN)	Skin - Moderate irritant	Human	-	10 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Moderate irritant	Rabbit	-	80 mg	-
butyl acrylate	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Mild irritant	Rabbit	-	50 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 10 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
2-octyl-2H-isothiazol-3-one	Eyes - Severe irritant	Rabbit	-	100 mg	-
ethanediol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Mild irritant	Rabbit	-	1 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	6 hours 1440 mg	-
	Skin - Mild irritant	Rabbit	-	555 mg	-
2-(2-methoxyethoxy)ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Moderate irritant	Rabbit	-	500 mg	-

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2-methoxyethanol	Eyes - Mild irritant	Guinea pig	-	10 ug	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 483 mg	-
2-ethoxyethanol	Eyes - Mild irritant	Guinea pig	-	10 ug	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Moderate irritant	Rabbit	-	50 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
2-methoxyethanol	Eyes - Mild irritant	Guinea pig	-	10 ug	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 483 mg	-

Conclusion/Summary : Not available.

Sensitisation

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
bronopol (INN)	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
diuron (ISO)	Category 2	-	-
IPBC	Category 1	-	-

Aspiration hazard

Not available.

Other information : Not available.

Section 12. Ecological information

12.1 Toxicity

There are no data available on the mixture itself.
Do not allow to enter drains or watercourses.

The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
diuron (ISO)	Acute EC50 0.0023 mg/l Fresh water	Algae - Chlorella pyrenoidosa	96 hours
	Acute EC50 2.4 ppb Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 0.005 mg/l Fresh water	Aquatic plants - Lemna sp.	96 hours
	Acute EC50 7.6 µg/l Fresh water	Aquatic plants - Lemna aequinoctialis	72 hours
	Acute EC50 7.2 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute EC50 8.6 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute EC50 8.6 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute EC50 8.4 ppm Fresh water	Daphnia - Daphnia magna	48 hours
	Acute IC50 2.41 µg/l Marine water	Aquatic plants - Halodule uninervis	72 hours
	Acute IC50 5.89 µg/l Marine water	Aquatic plants - Halodule uninervis	72 hours
	Acute IC50 2.47 µg/l Marine water	Aquatic plants - Zostera muelleri	72 hours
	Acute LC50 3044 µg/l Marine water	Crustaceans - Palaemon serratus - Zoea	48 hours
	Acute LC50 1.95 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute LC50 3100 µg/l Fresh water	Fish - Morone saxatilis	96 hours
	Acute LC50 2900 µg/l Fresh water	Fish - Cyprinus carpio - Fry	96 hours
	Chronic EC10 0.11 µg/l Fresh water	Algae - Fragilaria capucina - Exponential growth phase	96 hours
	Chronic EC10 0.76 µg/l Fresh water	Algae - Fragilaria capucina ssp. rumpens	96 hours
	Chronic IC10 0.47 µg/l Marine water	Aquatic plants - Halodule uninervis	72 hours
	Chronic IC10 0.7 µg/l Marine water	Aquatic plants - Halodule uninervis	72 hours
	Chronic IC10 0.49 µg/l Marine water	Aquatic plants - Zostera muelleri	72 hours
	Chronic NOEC 0.283 µg/l Marine water	Algae - Nitzschia pungens	96 hours
	Chronic NOEC 0.34 µg/l Marine water	Aquatic plants - Halodule uninervis	72 hours
	Chronic NOEC 0.34 µg/l Marine water	Aquatic plants - Zostera muelleri	72 hours
	Chronic NOEC 26.4 ppb	Fish - Pimephales promelas	60 days
	Chronic NOEC 26.4 ppb	Fish - Pimephales promelas	60 days
	Chronic NOEC 26.4 ppb	Fish - Pimephales promelas	60 days
	Chronic NOEC 33.4 µg/l Fresh water	Fish - Pimephales promelas - Embryo	63 days
bronopol (INN)	Acute EC50 0.02 ppm Fresh water	Algae - Desmodesmus subspicatus	96 hours
	Acute EC50 1.6 ppm Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 11.17 ppm Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic NOEC 1.94 ppm	Fish - Oncorhynchus mykiss	49 days
IPBC	Chronic NOEC 8.4 ppb	Fish - Pimephales promelas	35 days
OIT	Acute EC10 0.000224 mg/l	Algae - Navicula peliculosa	48 hours
	Acute EC50 0.084 mg/l	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 0.00129 mg/l	Algae - Navicula peliculosa	48 hours
	Acute EC50 0.42 mg/l	Daphnia	48 hours
	Acute EC50 107 ppb Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 47 ppb Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 8.5 ppb	Fish - Pimephales promelas	35 days
methylisothiazolinone	Acute EC50 0.24 mg/l	Daphnia	48 hours
	Acute EC50 0.18 ppm Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 0.18 mg/l	Fish	96 hours
	Acute LC50 12.4 mg/l	Fish - Lepomis Macrochirus	96 hours
	Acute LC50 6 mg/l	Fish - Oncorhynchus Mykiss	96 hours
	Acute LC50 0.07 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
ethanediol	Acute LC50 13140000 µg/l Fresh water	Crustaceans - Ceriodaphnia	48 hours

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		dubia	
	Acute LC50 13900000 µg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 10500000 µg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 6900000 µg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 10000000 µg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 41000 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 41100000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 47400000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 46300000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 45500000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 27540 mg/l Fresh water	Fish - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Acute LC50 52500 mg/l Fresh water	Fish - Pimephales promelas - Fry	96 hours
	Acute LC50 43900 mg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Acute LC50 49000000 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Acute LC50 8050000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
2-(2-methoxyethoxy)ethanol	Acute EC50 >930 ppm Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 7500000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
2-methoxyethanol	Acute LC50 >100 ppm Fresh water	Fish - Lepomis macrochirus	96 hours
2-ethoxyethanol	Acute LC50 >10000000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Acute LC50 >10000000 µg/l Marine water	Fish - Menidia beryllina	96 hours
2-methoxyethanol	Acute LC50 >100 ppm Fresh water	Fish - Lepomis macrochirus	96 hours
	Acute LC50 >10000000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Acute LC50 >10000000 µg/l Marine water	Fish - Menidia beryllina	96 hours
	Acute LC50 >100 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
IPBC	-	-	Readily

12.3 Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
1-isopropyl-2,2-dimethyltrimethylene diisobutyrate	-	5340	high
diuron (ISO)	2.84	5.2	low
bronopol (INN)	0.18	-	low
IPBC	2.81	-	low
n-butyl acrylate	2.38	17.27	low
OIT	2.45	-	low
ethanediol	-1.36	-	low
2-(2-methoxyethoxy)ethanol	-0.47	-	low
Methyl methacrylate	1.38	-	low
2-methoxyethanol	-0.77	-	low
2-ethoxyethanol	-0.32	-	low
2-methoxyethanol	-0.77	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Disposal considerations : Do not allow to enter drains or watercourses.
Dispose of according to all federal, state and local applicable regulations.
If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.
For further information, contact your local waste authority.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Disposal considerations : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers.
Empty containers must be scrapped or reconditioned.
Dispose of containers contaminated by the product in accordance with local or national legal provisions.

Section 13. Disposal considerations

Type of packaging	European waste catalogue (EWC)	
CEPE Paint Guidelines	15 01 10*	packaging containing residues of or contaminated by hazardous substances

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

Information pertaining to IATA and ADN is considered not relevant since the material is not packaged in the correct approved packaging required of these methods of transport.

	ADR	IMDG
14.1 UN number	Not regulated.	Not regulated.
14.2 UN proper shipping name	Not applicable.	Not applicable.
14.3 Transport hazard class(es) **Class** **Subsidiary class**	Not applicable. -	Not applicable. -
14.4 Packing group	Not applicable.	Not applicable.
14.5 Environmental hazards **Marine pollutant** **Marine pollutant substances**	No.	No. Not available.
14.6 Special precautions for user	**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.	
HI/Kemler number **Emergency schedules (EmS)**	Not available.	Not applicable.
14.7 Transport in bulk according to IMO instruments : Not applicable.		
Additional information	-	-

Section 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed, or the component present is below its threshold.

Substances of very high concern

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
2-methoxyethanol	Toxic to reproduction	Recommended	ED/01/2018	10/1/2019
2-ethoxyethanol	Toxic to reproduction	Recommended	ED/01/2018	10/1/2019
2-methoxyethanol	Toxic to reproduction	Recommended	ED/01/2018	10/1/2019

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

VOC for Ready-for-Use Mixture : Not applicable.

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

15.2 Chemical safety assessment

: No Chemical Safety Assessment has been carried out.

Not listed

Section 16. Other information

CEPE code : 1

Indicates information that has changed from previously issued version.

Abbreviations and acronyms :
ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
SGG = Segregation Group
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Skin Sens. 1, H317	Calculation method
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements

Section 16. Other information

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H360FD	May damage fertility. May damage the unborn child.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

Full text of classifications [CLP/GHS]

Acute Tox. 2	ACUTE TOXICITY - Category 2
Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Carc. 2	CARCINOGENICITY - Category 2
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
Skin Corr. 1	SKIN CORROSION/IRRITATION - Category 1
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1A	SKIN SENSITISATION - Category 1A
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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Version : 1

Notice to reader

Section 16. Other information

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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