

SAFETY DATA SHEET

According to EC 1907/2006 (REACH)

Date last verification : 2018-03-10
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Version number : 9.1

Last modifications in sections : 2.2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

SDS : 00062
Product code :
Supplier : POLYCHROMAL B.V.
 Postbus 8043
 1802 KA Alkmaar
 The Netherlands
 TEL:+31 72 5670799
 FAX:+31 72 5624095

Tradename : DURACOLOUR TRANSPARENT
Chemical name : BUTOXYETHANOL, 2-
CAS number : 111-76-2
EC-number : 203-905-0
REACH registration number : 01-2119475108-36
Formula : C₄H₉OC₂H₄OH
Molecular weight : 118.20

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

Use : Various
Uses advised against : Data not available.

1.3. Details of the supplier of the safety data sheet

Supplier safety data sheet : Philips Electronics Nederland B.V., Philips Environment & Safety, High Tech Campus 37, 5656 AE Eindhoven, Tel. +31 (0)40 27 41 645
Responsible department : hazcom@philips.com

1.4. Emergency telephone number

Emergency telephone number : +31 (0)497-598315

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

(EC) No 1272/2008

Acute toxicity, oral	Category 4	H302
Acute toxicity, dermal	Category 3	H311
Skin irritation	Category 2	H315
Serious eye irritation	Category 2	H319
Acute toxicity, inhalation	Category 3	H331

2.2. Label elements

(EC) No 1272/2008

Hazard pictogram(s)



Signal word : Danger !

Hazard statements

H302	Harmful if swallowed.
H311+H331	Toxic in contact with skin or if inhaled.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

Precautionary statements

P261.2	Avoid breathing vapours.
P264	Wash hands/skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280.5	Wear protective gloves/protective clothing/eye protection/face protection.
* P301+P312	IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P311	Call a POISON CENTER or doctor/physician.
P321	Specific treatment.
P330	Rinse mouth.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container to a hazardous or special waste collection point.

Hazardous component(s) BUTOXYETHANOL, 2-

Remarks on labelling none

2.3. Other hazards

If applicable: see section 6.1 and section 7.1.

SECTION 3: Composition/information on ingredients

Component	CAS-no.	Index No.	Percentage(%)	Label
	EC-no.	Registration no.		
BUTOXYETHANOL, 2-	111-76-2	603-014-00-0	100.0	GHS06
	203-905-0	01-2119475108-36		H302 Acute tox. 4 H311 Acute tox. 3 H315 Skin irrit. 2 H319 Eye irrit. 2 H331 Acute tox. 3

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

SECTION 4: First aid measures

4.1. Description of first aid measures

Skin	: Do not touch contaminated clothes with bare hands. Remove contaminated clothes immediately. Remove residue of the substance from the skin (f.i. rinse with plenty of water). In case of serious exposure bring victim as soon as possible to the hospital, in other cases call for a doctor.
Ingestion	: If the victim is conscious let him rinse the mouth with water. Do NOT let him drink. Bring victim as soon as possible to hospital.
Inhalation	: Bring victim into the fresh air as soon as possible and let rest. In case of severe exposure call for a doctor. In case of breathing problems, loose squeezing clothes and if victim is conscious bring victim in high sitting position. In case of stagnation of breathing give IMMEDIATELY oxygen and transport to hospital as soon as possible.
Eyes	: Rinse for a long time with plenty of water. In case of eye-sight disturbances bring victim immediately into the hospital, in other cases call for a doctor

4.2. Most important symptoms and effects, both acute and delayed

Skin	local	: The substance is irritating: redness, pain.
	general	: Degreasing: in case of sustained contact a rough, dry skin, eczema.
Ingestion	local	: The substance may be absorbed via the skin.
	general	: The substance is irritating: sore throat, abdominal pain.
Inhalation	local	: The substance may be absorbed after ingestion.
	general	: The substance is with atomising irritating: sore throat, coughing.
Eyes	local	: The substance may be absorbed after inhalation.
	general	: The substance is irritating: redness, pain.
Remarks symptoms		: The substance has an effect on: the liver, the kidneys, the blood (haemolysis), the blood (anemia), the central nervous system.

4.3. Indication of any immediate medical attention and special treatment needed

For advice on further treatment contact a (national) poison center.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable fire-extinguisher

carbon dioxide, extinguishing powder, water spray, alcohol resistant foam

Unsuitable fire-extinguisher

not traceable

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in fire : carbon monoxide

5.3. Advice for firefighters

In the event of fire, wear protective clothing and use breathing apparatus that is independent of the ambient air.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Precautions

Use protective equipment. See section 8.
Read label before use.
Take precautionary measures against static discharge.

Emergency procedure

Acute risk to health! IMMEDIATELY evacuate and close off the danger zone. Notify expert!

6.2. Environmental precautions

Remainder material or uncleaned empty packagings have to be incinerated in a proper installation or dumped on an approved landfill, in accordance with local and national legislation.

6.3. Methods and material for containment and cleaning up

Spillage procedure

Absorb the liquid in appropriate absorbent (e.g. Powersorb, dry sand, diatomite, vermiculite etc.), shovel the mixture into plastic bags and remove to the central depot for hazardous waste.

6.4. Reference to other sections

See section 8 for appropriate personal protection.
See section 13 for additional information on waste treatment.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Observe label precautions.
Do not eat, drink or smoke in work areas. Remove contaminated clothing and protective equipment. Wash hands after leaving the work area.
Take precautionary measures against static discharge.

Local exhausting : Apply local exhaust.

Storage code (on behalf of PGS : T1
15)

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : See also any precautionary statements in section 2.2.

Store product dry, in a well ventilated area, away from ignition sources, in a closed packaging, cool.

Storage temperature : $\geq 15\text{ }^{\circ}\text{C}$ - $\leq 25\text{ }^{\circ}\text{C}$

7.3. Specific end use(s)

Data not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits :

applicable to: The Netherlands (20 °C; 1013 mbar)

TWA(8 hours): 100 mg/m3 S BUTOXYETHANOL, 2- (Statutory threshold limit value)
TWA(15 minutes): 246 mg/m3 S BUTOXYETHANOL, 2- (Statutory threshold limit value)

applicable to: Belgium (20 °C; 1013 mbar)

TWA(8 hours): 98 mg/m3 S BUTOXYETHANOL, 2-
TWA(15 minutes): 246 mg/m3 S BUTOXYETHANOL, 2-

applicable to: Germany (20 °C; 1013 mbar)

TWA(8 hours): 49 mg/m3 S BUTOXYETHANOL, 2-
TWA(15 minutes): 196 mg/m3 S BUTOXYETHANOL, 2-

applicable to: United States of America (25 °C; 1013 mbar)

TWA(8 hours): 240 mg/m3 S BUTOXYETHANOL, 2- [according to OSHA]
TWA(8 hours): 20 ppm BUTOXYETHANOL, 2- [according to ACGIH]

applicable to: Sweden (20 °C; 1013 mbar)

TWA(8 hours): 50 mg/m3 S BUTOXYETHANOL, 2-
TWA(15 minutes): 246 mg/m3 S BUTOXYETHANOL, 2-

applicable to: Switzerland (20 °C; 1013 mbar)

TWA(8 hours): 49 mg/m3 S BUTOXYETHANOL, 2-
TWA(15 minutes): 98 mg/m3 S BUTOXYETHANOL, 2-

applicable to: European Union (20 °C; 1013 mbar)

TWA(8 hours): 98 mg/m3 S BUTOXYETHANOL, 2-
TWA(15 minutes): 246 mg/m3 S BUTOXYETHANOL, 2-

C=Ceiling; S=Skin

Remarks exposure limits :

none

DNEL (Derived No Effect Level)

Worker - Inhalation - Short term exposure - Systemic effects: 1091 mg/m3

BUTOXYETHANOL, 2-

Source : ECHA

Worker - Inhalation - Short term exposure - Local effects: 246 mg/m3

BUTOXYETHANOL, 2-

Source : ECHA

Worker - Dermal - Long term exposure - Systemic effects: 125 mg/kg bw/day

BUTOXYETHANOL, 2-

Source : ECHA

Worker - Inhalation - Long term exposure - Systemic effects: 98 mg/m3

BUTOXYETHANOL, 2-

Source : ECHA

Consumer - Dermal - Short term exposure - Systemic effects: 89 mg/kg bw/day

BUTOXYETHANOL, 2-

Source : ECHA

Consumer - Inhalation - Short term exposure - Systemic effects: 426 mg/m3

BUTOXYETHANOL, 2-

Source : ECHA

Consumer - Oral - Short term exposure - Systemic effects: 26.7 mg/kg bw/day

BUTOXYETHANOL, 2-

Source : ECHA

Consumer - Inhalation - Short term exposure - Local effects: 147 mg/m3

BUTOXYETHANOL, 2-

Source : ECHA

Consumer - Dermal - Long term exposure - Systemic effects: 75 mg/kg bw/day

BUTOXYETHANOL, 2-

Source : ECHA

Consumer - Inhalation - Long term exposure - Systemic effects: 59 mg/m3

BUTOXYETHANOL, 2-

Source : ECHA

Consumer - Oral - Long term exposure - Systemic effects: 6.3 mg/kg bw/day

BUTOXYETHANOL, 2-

Source : ECHA

Worker - Dermal - Short term exposure - Systemic effects: 89 mg/kg bw/day

BUTOXYETHANOL, 2-

Source : ECHA

PNEC (Predicted No Effect Concentration)

Fresh water: 8.8 mg/l

BUTOXYETHANOL, 2-

Source : ECHA

Marine water: 0.88 mg/l

BUTOXYETHANOL, 2-

Source : ECHA

Intermittent releases: 9.1 mg/l

BUTOXYETHANOL, 2-

Source : ECHA

Fresh water sediment: 34.6 mg/kg

BUTOXYETHANOL, 2-

Source : ECHA

Marine water sediment: 3.46 mg/kg

BUTOXYETHANOL, 2-

Source : ECHA

Soil: 2.33 mg/kg

BUTOXYETHANOL, 2-

Source : ECHA

Sewage Treatment Plant (STP): 463 mg/l

BUTOXYETHANOL, 2-

Source : ECHA

Oral (food): 0.02 g/kg

BUTOXYETHANOL, 2-

Source : ECHA

8.2. Exposure controls

Advised personal protection :

Hands : neoprene gloves
butyl rubber gloves

Breakthrough time	:	For information: consult the supplier of the gloves.
Eyes	:	acid goggles
Inhalation	:	none (when sufficient exhausting) Gasmask filtertype A (when insufficient exhausting)
Skin	:	antistatic clothing antistatic footwear

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	colourless
Odour	:	specific
Odour threshold (20°C; 1013 mbar)	:	0.491 mg/m ³
pH	:	≥5 - ≤9
Melting point/range	:	≥-75 °C - ≤-70 °C
Apparent melting point	:	not applicable
Boiling point/range	:	≥163 °C - ≤173 °C (1013 mbar)
Flash point/range	:	≥61 °C - ≤72 °C
Vapor rate/range	:	not traceable
Flammability (solid, gas)	:	data not available
Explosive limits	:	LEL:≥1.1 vol.% - UEL:≤12.7 vol.%
Vapour pressure	:	0.1 kPa (20 °C)
Relative density	:	≥0.89700 - ≤0.90500 (water=1) (20 °C)
Solubility in water	:	complete
Log Po/w	:	0.81

Method : OECD 107
Source : IUCLID

Autoignition temperature	:	≥230 °C - ≤250 °C
Decomposition temperature	:	not traceable
Viscosity	:	≥3.3 - ≤5.3 mPa.s (20 °C)
Dust explosions possible in air	:	not applicable
Oxidising properties	:	no

9.2. Other information

Solubility in fat	:	not traceable
Electrostatic chargement	:	yes
Critical temperature	:	not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

See section 10.2 - 10.6.

10.2. Chemical stability

The substance or mixture is stable under normal conditions. See also section 10.4.

10.3. Possibility of hazardous reactions

Reactions with water	:	no
Other hazardous conditions	:	In contact with air peroxides can be formed.

10.4. Conditions to avoid

Avoid discharge of static electricity.

10.5. Incompatible materials

Hazardous reactions with	:	oxidizing substances, acids, alkaline solutions, by reaction with light metals releases hydrogen
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10.6. Hazardous decomposition products

Hazardous decomposition products at heating : none

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity
LD-50: 470 mg/kg (ORL-RAT)
Harmful if swallowed.

BUTOXYETHANOL, 2-

Source : IUCLID

Acute dermal toxicity
LD-50: 220 mg/kg (SKN-RBT) BUTOXYETHANOL, 2- **Source** : IUCLID
Toxic in contact with skin.

Acute inhalation toxicity
LC-50: 2.216 mg/l/4H (IHL-RAT) BUTOXYETHANOL, 2- **Source** : IUCLID
Toxic if inhaled.

Ames test
not traceable

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/irritation
Causes serious eye irritation.

Respiratory or skin sensitisation
The substance or mixture is not classified for respiratory or skin sensitisation.

Germ cell mutagenicity
The substance or mixture is not classified for germ cell mutagenicity.

Carcinogenicity
The substance or mixture is not classified for carcinogenicity.

Additional information regarding carcinogenicity (NTP, IARC, OSHA)
NTP: no IARC: 3 OSHA: no BUTOXYETHANOL, 2-

Reproductive toxicity
The substance or mixture is not classified for reproductive toxicity.

Specific target organ toxicity-single exposure
The substance or mixture is not classified for specific target organ toxicity-single exposure.

Specific target organ toxicity-repeated exposure
The substance or mixture is not classified for specific target organ toxicity-repeated exposure.

Aspiration hazard
The substance or mixture is not classified for aspiration hazard.

Symptoms

Skin	local	: The substance is irritating: redness, pain.
		: Degreasing: in case of sustained contact a rough, dry skin, eczema.
Ingestion	general	: The substance may be absorbed via the skin.
	local	: The substance is irritating: sore throat, abdominal pain.
Inhalation	general	: The substance may be absorbed after ingestion.
	local	: The substance is with atomising irritating: sore throat, coughing.
Eyes	general	: The substance may be absorbed after inhalation.
	local	: The substance is irritating: redness, pain.
Remarks symptoms		: The substance has an effect on: the liver, the kidneys, the blood (haemolysis), the blood (anemia), the central nervous system.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity
EC-50: $\geq 600 - \leq 1000$ mg/l/48H (Daphnia) BUTOXYETHANOL, 2-
LC-50: 1250 mg/l/96H (Fish) BUTOXYETHANOL, 2- **Source** : IUCLID

12.2. Persistence and degradability

Biological oxygen demand : not traceable
Chemical oxygen demand : 2.2 g/g BUTOXYETHANOL, 2- **Source** : IUCLID
Biological/chemical oxygen demand ratio : not traceable
Degradability : not traceable

12.3. Bioaccumulative potential

Bioconcentration factor (BCF) : not traceable
Log Po/w : 0.81 BUTOXYETHANOL, 2- **Method** : OECD 107
Source : IUCLID

12.4. Mobility in soil

Henry Constant : not traceable

12.5. Results of PBT and vPvB assessment

Data not available.

12.6. Other adverse effects

Remarks on ecotoxicity : none

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Remainder material or uncleaned empty packagings have to be incinerated in a proper installation or dumped on an approved landfill, in accordance with local and national legislation.

SECTION 14: Transport information

14.1. UN number

ADR/RID : 2810
IMDG/IMO : 2810
IATA/ICAO : 2810

14.2. UN proper shipping name

ADR/RID : TOXIC LIQUID, ORGANIC, N.O.S.(BUTOXYETHANOL, 2-)
IMDG/IMO : TOXIC LIQUID, ORGANIC, N.O.S.(BUTOXYETHANOL, 2-)
IATA/ICAO : TOXIC LIQUID, ORGANIC, N.O.S.(BUTOXYETHANOL, 2-)

14.3. Transport hazard class(es)

ADR/RID : 6.1 IMDG/IMO : 6.1 IATA/ICAO : 6.1

14.4. Packing group

ADR/RID : III IMDG/IMO : III IATA/ICAO : III

14.5. Environmental hazards

Marine pollutant : no

14.6. Special precautions for user

Hazard identification number (ADR/RID) : 60
EmS (IMDG/IMO) : F-A, S-A

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Data not available.

SECTION 15: Regulatory information

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

- The component(s), as mentioned in section 3, are registered in the Toxic Substances Control Act Inventory (TSCA-USA).

15.2. Chemical safety assessment

- Data not available.

SECTION 16: Other information

Remarks on SDS : none

Overview relevant H-sentences from all components in section 3

H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.

Training advice

Provide adequate information, instruction and training for operators.

A key or legend to abbreviations and acronyms used in the safety data sheet

REACH Registration, Evaluation and Authorisation of Chemicals

GHS	Globally Harmonised System of Classification and Labelling of Chemicals
CAS	Chemical Abstracts Service
TGG = TWA	Time Weighted Average
LEL	Lower Explosive Limit
UEL	Upper Explosive Limit
NTP	National Toxicology Program
KHC	Known Human Carcinogen
RAHC	Reasonably Anticipated Human Carcinogen
IARC	International Agency for Research on Cancer
OSHA	Occupational Safety & Health Administration
ADR	Accord européen relatif au transport international des marchandises Dangereuses par Route
RID	Règlement concernant le transport international ferroviaire des marchandises dangereuses
UN	United Nations
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
EmS	Emergency Schedule

* Point to alterations with regard to the previous version.

The information provided in this Safety Data Sheet is believed to be correct as of the date issued. Philips Electronics Nederland B.V. makes no warranty as to its contents, nor as to its fitness for any particular purpose or use.