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

1.1. Product identifier

Product form : Mixture

Trade name/designation : JCB Antifreeze HP / Coolant - Readymix

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

1.2.1. Relevant identified uses

Main use category : Industrial use,Professional use

Use of the substance/mixture : Coolant

1.2.2. Uses advised against

No data available

1.3. Details of the supplier of the safety data sheet

Supplier Australia: JCB CEA 50 Horningsea Park NSW 2171 Phone 1300 788 757

Supplier
JCB Service
World Parts Centre

Beamhurst Uttoxeter
Staffordshire
ST14 5PA - UK

Supplier
Solventis Ltd
Compton House, The Guildway, Old Portsmouth Road, Guildford

GU3 1LR Surrey - UK
T +44 1483 203224 - F +44 1483 205040
sds@solventis.net

1.4. Emergency telephone number

JCB CEA: 1300 788 757
Poisons Information Centre: 131 126 https://www.health.gov.au/contacts/poisons-information-centre

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Hazardous under GHS.
Classification according to Regulation (EC) No. 1272/2008 [CLP]
Regulation (EU) 2015/830 (REACH Annex II)

Acute Tox. 4 (Oral) H302

STOT RE 2 H373

Full text of H statements : see section 16**Label elements****Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :

GHS07 GHS08

Signal word : Warning

Hazardous ingredients : ethanediol, ethylene glycol; sodium nitrite

Hazard statements (CLP) : H302 - Harmful if swallowed.
H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure (if swallowed).

Precautionary statements (CLP) : P260 - Do not breathe vapours, spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P301+P312 - IF SWALLOWED: Call a POISON CENTER, a doctor if you feel unwell.
P330 - Rinse mouth.
P501 - Dispose of contents and container to a hazardous or special waste collection point.

2.2. Other hazards

Other hazards : Results of PBT and vPvB assessment : Not applicable.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Substance name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ethanediol, ethylene glycol	(CAS-No.) 107-21-1 (EC-No.) 203-473-3 (EC Index) 603-027-00-1	30 - 60	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
Sodium benzoate	(CAS-No.) 532-32-1 (EC-No.) 208-534-8	1 - 3	Eye Irrit. 2, H319
disodium tetraborate pentahydrate, borax pentahydrate substance listed as REACH Candidate (Disodium tetraborate, anhydrous)	(CAS-No.) 12179-04-3 (EC-No.) 215-540-4 (EC Index) 005-011-02-9	1 - 3	Repr. 1B, H360FD
sodium nitrite	(CAS-No.) 7632-00-0 (EC-No.) 231-555-9 (EC Index) 007-010-00-4	0,1 - 1	Ox. Sol. 3, H272 Acute Tox. 3 (Oral), H301 Eye Irrit. 2, H319 Aquatic Acute 1, H400

Specific concentration limits:

Substance name	Product identifier	Specific concentration limits
disodium tetraborate pentahydrate, borax pentahydrate	(CAS-No.) 12179-04-3 (EC-No.) 215-540-4 (EC Index) 005-011-02-9	(C >= 6,5) Repr. 1B, H360FD

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

Additional advice : First aider: Pay attention to self-protection. Concerning personal protective equipment to use, see section 8. Never give anything by mouth to an unconscious person. In case of doubt or persistent symptoms, consult always a physician. Show this safety data sheet to the doctor in attendance.

Inhalation : Remove person to fresh air and keep comfortable for breathing. In case of doubt or persistent symptoms, consult always a physician.

Skin contact : Take off contaminated clothing. Gently wash with plenty of soap and water. In case of doubt or persistent symptoms, consult always a physician.

Eyes contact : Rinse immediately carefully and thoroughly with eye-bath or water. In case of doubt or persistent symptoms, consult always a physician.

Ingestion : Rinse mouth thoroughly with water. Get medical advice/attention.

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

Inhalation : The following symptoms may occur: Inhalation of dust may cause irritation of the respiratory system.

Skin contact : The following symptoms may occur: Contact with dust may cause mechanical irritation or drying of the skin.

Eyes contact : The following symptoms may occur: Dust may cause painful eye irritation and tearing.

Ingestion : Harmful if swallowed. The following symptoms may occur: Ingestion may cause nausea and vomiting, Gastrointestinal complaints.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : carbon dioxide (CO2), powder, alcohol-resistant foam, water spray.

Unsuitable extinguishing media : Strong water jet.

5.2. Special hazards arising from the substance or mixture

Specific hazards : Not flammable. Heating causes rise in pressure with risk of bursting.

Hazardous decomposition products in case of fire : Carbon oxides (CO, CO2).

5.3. Advice for firefighters

Firefighting instructions : Evacuate area. Use water spray or fog for cooling exposed containers. Contain the extinguishing fluids by bunding. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus.

Other information : Do not allow run-off from fire-fighting to enter drains or water courses. Dispose of waste in accordance with environmental legislation.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

For non-emergency personnel : Evacuate unnecessary personnel. Keep upwind. Provide adequate ventilation. Wear recommended personal protective equipment. Do not breathe vapours. Avoid contact with skin, eyes and clothing. Concerning personal protective equipment to use, see section 8.

6.1.2. For emergency responders

For emergency responders : Ensure procedures and training for emergency decontamination and disposal are in place. Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Stop leak if safe to do so. Dam up the liquid spill. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Recover large spills by pumping (use an explosion proof or hand pump). Place in a suitable container for disposal in accordance with the waste regulations (see Section 13). This material and its container must be disposed of in a safe way, and as per local legislation.

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : : Provide adequate ventilation. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8. Do not breathe vapours. Avoid contact with skin, eyes and clothing. Ensure proper process control to avoid excess waste discharge (temperature, concentration, pH, time). Avoid release to the environment. Take any precaution to avoid mixing with Incompatible materials, Refer to Section 10 on Incompatible Materials.

Hygiene measures : Keep good industrial hygiene. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feedingstuffs. Remove contaminated clothes. Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a dry, cool and well-ventilated place. Do not store near or with any of the incompatible materials listed in section 10. Bund storage facilities to prevent soil and water pollution in the event of spillage.

Packaging materials : Keep only in the original container.

7.3. Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ethanediol, ethylene glycol (107-21-1)		
EU	IOELV TWA (mg/m³)	52 mg/m³
EU	IOELV TWA (ppm)	20 ppm
EU	IOELV STEL (mg/m³)	104 mg/m³
EU	IOELV STEL (ppm)	40 ppm
EU	Notes	Possibility of significant uptake through the skin
Austria	MAK (mg/m³)	26 mg/m³
Austria	MAK (ppm)	10 ppm
Austria	MAK Short time value (mg/m³)	52 mg/m³
Austria	MAK Short time value (ppm)	20 ppm
Bulgaria	OEL TWA (mg/m³)	52 mg/m³
Bulgaria	OEL TWA (ppm)	20 ppm
Bulgaria	OEL STEL (mg/m³)	104 mg/m³
Bulgaria	OEL STEL (ppm)	40 ppm
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	52 mg/m³
Croatia	GVI (granična vrijednost izloženosti) (ppm)	20 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m³)	104 mg/m³
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	40 ppm
Cyprus	OEL TWA (mg/m³)	52 mg/m³
Cyprus	OEL TWA (ppm)	20 ppm
Cyprus	OEL STEL (mg/m³)	104 mg/m³
Cyprus	OEL STEL (ppm)	40 ppm
Czech Republic	Expoziční limity (PEL) (mg/m³)	50 mg/m³

ethanediol, ethylene glycol (107-21-1)		
Denmark	Grænseværdie (langvarig) (mg/m³)	26 mg/m³ 10 mg/m³ (atomized)
Denmark	Grænseværdie (langvarig) (ppm)	10 ppm
Estonia	OEL TWA (mg/m³)	52 mg/m³ (total concentration of aerosol and vapor)
Estonia	OEL TWA (ppm)	20 ppm (total concentration of aerosol and vapor)
Estonia	OEL STEL (mg/m³)	104 mg/m³ (total concentration of aerosol and vapor)
Estonia	OEL STEL (ppm)	40 ppm (total concentration of aerosol and vapor)
Finland	HTP-arvo (8h) (mg/m³)	50 mg/m³
Finland	HTP-arvo (8h) (ppm)	20 ppm
Finland	HTP-arvo (15 min)	100 mg/m³
Finland	HTP-arvo (15 min) (ppm)	40 ppm
France	VME (mg/m³)	52 mg/m³ (indicative limit-vapor)
France	VME (ppm)	20 ppm (indicative limit-vapor)
France	VLE (mg/m³)	104 mg/m³ (indicative limit-vapor)
France	VLE (ppm)	40 ppm (indicative limit-vapor)
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	26 mg/m³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 900 Occupational exposure limit value (ppm)	10 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Gibraltar	8h mg/m3	52 mg/m³
Gibraltar	8h ppm	20 ppm
Gibraltar	Short-term mg/m3	104 mg/m³
Gibraltar	Short-term ppm	40 ppm
Greece	OEL TWA (mg/m³)	125 mg/m³ (vapor)
Greece	OEL TWA (ppm)	50 ppm (vapor)
Greece	OEL STEL (mg/m³)	125 mg/m³ (vapor)
Greece	OEL STEL (ppm)	50 ppm (vapor)
Hungary	AK-érték	52 mg/m³
Hungary	CK-érték	104 mg/m³
Ireland	OEL (8 hours ref) (mg/m³)	10 mg/m³ (particulate) 52 mg/m³ (vapour)
Ireland	OEL (8 hours ref) (ppm)	20 ppm (vapour)
Ireland	OEL (15 min ref) (mg/m3)	104 mg/m³ (vapour)
Ireland	OEL (15 min ref) (ppm)	40 ppm (particulate)
Italy	OEL TWA (mg/m³)	52 mg/m³
Italy	OEL TWA (ppm)	20 ppm
Italy	OEL STEL (mg/m³)	104 mg/m³
Italy	OEL STEL (ppm)	40 ppm
Latvia	OEL TWA (mg/m³)	52 mg/m³
Latvia	OEL TWA (ppm)	20 ppm

ethanediol, ethylene glycol (107-21-1)		
Lithuania	IPRV (mg/m³)	25 mg/m³ (aerosol and vapor)
Lithuania	IPRV (ppm)	10 ppm (aerosol and vapor)
Lithuania	TPRV (mg/m³)	50 mg/m³ (aerosol and vapor)
Lithuania	TPRV (ppm)	20 ppm (aerosol and vapor)
Luxembourg	OEL TWA (mg/m³)	52 mg/m³
Luxembourg	OEL TWA (ppm)	20 ppm
Luxembourg	OEL STEL (mg/m³)	104 mg/m³
Luxembourg	OEL STEL (ppm)	40 ppm
Malta	OEL TWA (mg/m³)	52 mg/m³
Malta	OEL TWA (ppm)	20 ppm
Malta	OEL STEL (mg/m³)	104 mg/m³
Malta	OEL STEL (ppm)	40 ppm
Netherlands	Grenswaarde TGG 8H (mg/m³)	52 mg/m³ (fume) 10 mg/m³ (droplets)
Netherlands	Grenswaarde TGG 15MIN (mg/m³)	104 mg/m³
Poland	NDS (mg/m³)	15 mg/m³
Poland	NDSCh (mg/m³)	50 mg/m³
Portugal	OEL TWA (mg/m³)	52 mg/m³ (indicative limit value)
Portugal	OEL TWA (ppm)	20 ppm (indicative limit value)
Portugal	OEL STEL (mg/m³)	104 mg/m³ (indicative limit value)
Portugal	OEL STEL (ppm)	40 ppm (indicative limit value)
Portugal	OEL - Ceilings (mg/m³)	100 mg/m³ (aerosol only)
Romania	OEL TWA (mg/m³)	52 mg/m³
Romania	OEL TWA (ppm)	20 ppm
Romania	OEL STEL (mg/m³)	104 mg/m³
Romania	OEL STEL (ppm)	40 ppm
Slovakia	NPHV (priemerná) (mg/m³)	52 mg/m³
Slovakia	NPHV (priemerná) (ppm)	20 ppm
Slovakia	NPHV (Hraničná) (mg/m³)	104 mg/m³
Slovenia	OEL TWA (mg/m³)	52 mg/m³
Slovenia	OEL TWA (ppm)	20 ppm
Slovenia	OEL STEL (mg/m³)	104 mg/m³
Slovenia	OEL STEL (ppm)	40 ppm
Spain	VLA-ED (mg/m³)	52 mg/m³ (indicative limit value)
Spain	VLA-ED (ppm)	20 ppm (indicative limit value)
Spain	VLA-EC (mg/m³)	104 mg/m³
Spain	VLA-EC (ppm)	40 ppm
Sweden	nivågränsvärde (NVG) (mg/m³)	25 mg/m³ (the limit value applies to the combined concentration of vapor and aerosolaerosol and vapor)
Sweden	nivågränsvärde (NVG) (ppm)	10 ppm (the limit value applies to the combined concentration of vapor and aerosol-aerosol and vapor)
Sweden	kortidsvärde (KTV) (mg/m³)	104 mg/m³ (aerosol and vapor)
Sweden	kortidsvärde (KTV) (ppm)	40 ppm (aerosol and vapor)

ethanediol, ethylene glycol (107-21-1)		
United Kingdom	WEL TWA (mg/m³)	10 mg/m³ (particulates) 52 mg/m³ (vapour)
United Kingdom	WEL TWA (ppm)	20 ppm (vapour)
United Kingdom	WEL STEL (mg/m³)	104 mg/m³ (vapour) 30 mg/m³ (calculated-particulate)
United Kingdom	WEL STEL (ppm)	40 ppm (vapour)
Norway	Grenseverdier (AN) (mg/m³)	20 mg/m³ (equal to the standard for nuisance dust-dust) 52 mg/m³ (total sum of limit values for both vapor and dust)
Norway	Grenseverdier (AN) (ppm)	52 ppm (total sum of limit values for both vapor and dust-total dust and vapor)
Norway	Grenseverdier (Korttidsverdi) (mg/m3)	104 mg/m³ (value from the regulation-dust)
Norway	Grenseverdier (Korttidsverdi) (ppm)	40 ppm (value from the regulation)
Switzerland	MAK (mg/m³)	26 mg/m³
Switzerland	MAK (ppm)	10 ppm
Switzerland	KZGW (mg/m³)	52 mg/m³
Switzerland	KZGW (ppm)	20 ppm
Australia	TWA (mg/m³)	10 mg/m³ (particulate) 52 mg/m³ (vapour)
Australia	TWA (ppm)	20 ppm (vapour)
Australia	STEL (mg/m³)	104 mg/m³ (vapour)
Australia	STEL (ppm)	40 ppm (vapour)
Canada (Quebec)	PLAFOND (mg/m³)	127 mg/m³ (mist and vapour)
Canada (Quebec)	PLAFOND (ppm)	50 ppm (mist and vapour)
USA - ACGIH	ACGIH TWA (ppm)	25 ppm (vapor fraction)
USA - ACGIH	ACGIH STEL (mg/m³)	10 mg/m³ (inhalable particulate matter, aerosol only)
USA - ACGIH	ACGIH STEL (ppm)	50 ppm (vapor fraction)
disodium tetraborate pentahydrate, borax pentahydrate (12179-04-3)		
Belgium	Limit value (mg/m³)	2 mg/m³
Belgium	Short time value (mg/m³)	6 mg/m³
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	1 mg/m³
Denmark	Grænseværdie (langvarig) (mg/m³)	1 mg/m³
France	VME (mg/m³)	1 mg/m³
Greece	OEL TWA (mg/m³)	10 mg/m³
Ireland	OEL (8 hours ref) (mg/m³)	1 mg/m³
Ireland	OEL (15 min ref) (mg/m3)	3 mg/m³ (calculated)
Portugal	OEL TWA (mg/m³)	2 mg/m³ (inhalable fraction)
Portugal	OEL STEL (mg/m³)	6 mg/m³ (inhalable fraction)
Spain	VLA-ED (mg/m³)	2 mg/m³
Spain	VLA-EC (mg/m³)	6 mg/m³
United Kingdom	WEL TWA (mg/m³)	1 mg/m³
United Kingdom	WEL STEL (mg/m³)	3 mg/m³ (calculated)
Australia	TWA (mg/m³)	1 mg/m³
Canada (Quebec)	VEMP (mg/m³)	1 mg/m³
USA - ACGIH	ACGIH TWA (mg/m³)	2 mg/m³ (inhalable particulate matter)
USA - ACGIH	ACGIH STEL (mg/m³)	6 mg/m³ (inhalable particulate matter)
USA - NIOSH	NIOSH REL (TWA) (mg/m³)	1 mg/m³

sodium nitrite (7632-00-0)

Lithuania	NRV (mg/m³)	0,1 mg/m³

Additional information : Personal air monitoring :. Room air monitoring. Recommended monitoring procedures

8.2. Exposure controls

Engineering measure(s) : Provide adequate ventilation. Organisational measures to prevent /limit releases, dispersion and exposure. Safe handling: see section 7 .

Personal protective equipment : The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hand protection : Wear chemically resistant gloves (tested to EN374) . Suitable material: Butyl rubber, Polyvinylalcohol (PVA), Nitrile rubber gloves. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Eye protection : Use suitable eye protection. (EN166):

Body protection : Wear suitable protective clothing.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. Half-face mask (EN 140). Full face mask (EN 136). Filter type: (type A2), Suitable mask with particle filter P3 (European Norm 143). The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used. (EN 137)

Thermal hazard protection : Not required for normal conditions of use. Use dedicated equipment.

Environmental exposure controls : Avoid release to the environment. Comply with applicable Community environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Viscous. liquid.
Colour	: Colourless.
Odour	: odourless.
Odour threshold	: No data available
pH	: Not applicable
Relative evaporation rate (butylacetate=1)	: No data available
Melting / freezing point	: No data available
Freezing point	: No data available
Initial boiling point and boiling range	: > 160 °C >160 - >195°C @ 760 mm Hg
Flash point	: No data available
Auto-ignition temperature	: 410 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable,liquid
Vapour pressure	: > 0,1 mPa @ 20°C
Vapour density	: 2,14
Relative density	: 1,0787 @ 20°C
Solubility	: Miscible with : Acetone, alcoholic. Water: Miscible
Partition coefficient n-octanol/water	: -1,36
Kinematic viscosity	: No data available

Dynamic viscosity	: No data available
Explosive properties	: Not applicable. The study does not need to be conducted because there are no chemical groups associated with explosive properties present in the molecule.
Oxidising properties	: Not applicable. The classification procedure needs not to be applied because there are no chemical groups present in the molecule which are associated with oxidising properties.
Explosive limits	: 3,2

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reference to other sections: 10.4 & 10.5.

7.3. Chemical stability

Stable under normal conditions.

7.4. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

7.5. Conditions to avoid

Safe handling: see section 7.

7.6. Incompatible materials

Safe handling: see section 7.

7.7. Hazardous decomposition products

Reference to other sections: 5.2.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

ATE CLP (oral)	765,883 mg/kg bodyweight
ethanediol, ethylene glycol (107-21-1)	
LD50/oral/rat	> 1600 mg/kg
LD50 oral	1600 mg/kg
LD50/dermal/rat	10600 mg/kg
Sodium benzoate (532-32-1)	
LD50/oral/rat	> 2000 mg/kg
LD50/dermal/rabbit	>= 2000 mg/kg
disodium tetraborate pentahydrate, borax pentahydrate (12179-04-3)	
LD50/oral/rat	> 2500 mg/kg (OECD 401)
LD50/dermal/rabbit	> 2000 mg/kg
LC50/inhalation/4h/rat (ppm)	> 2,04 mg/l
sodium nitrite (7632-00-0)	
LD50/oral/rat	85 mg/kg
LC50/inhalation/4h/rat	5,5 mg/l/4h

Skin corrosion/irritation	Not classified (Based on available data, the classification criteria are not met.) pH: Not applicable
:	Not classified (Based on available data, the classification criteria are not met.) pH: Not applicable
Serious eye damage/irritation	
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met.)

Germ cell mutagenicity	:	Not classified (Based on available data, the classification criteria are not met.)
Carcinogenicity	:	Not classified (Based on available data, the classification criteria are not met.)
Reproductive toxicity	:	Not classified (Based on available data, the classification criteria are not met.)
STOT-single exposure	:	Not classified (Based on available data, the classification criteria are not met.)
STOT-repeated exposure	:	May cause damage to organs (kidneys) through prolonged or repeated exposure (if swallowed).
Aspiration hazard	:	Not classified (Based on available data, the classification criteria are not met.)
Other adverse effects	:	May cause damage to organs through prolonged or repeated exposure.
Other information	:	Symptoms related to the physical, chemical and toxicological characteristics. For further information see section 4.

SECTION 12: Ecological information

12.1. Toxicity

Environmental properties : According to the criteria of the European classification and labelling system, the substance/the product has not to be labelled as "dangerous for the environment".

ethanediol, ethylene glycol (107-21-1)	
LC50 fish 1	8050 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 Daphnia 1	41100 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	14 - 18 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
ErC50 (algae)	13000 (6500 - 13000) mg/l Selenastrum capricornutum
NOEC chronic fish	15380 mg/l Pimephales promelas (fathead minnow)
NOEC chronic crustacea	8590 mg/l Ceriodaphnia spec
Sodium benzoate (532-32-1)	
LC50 fish 1	> 1000 (420 - 558) mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	< 650 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	> 100 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
disodium tetraborate pentahydrate, borax pentahydrate (12179-04-3)	
LC50 fish 1	> 100 mg/l pices
EC50 Daphnia 1	340 mg/l
sodium nitrite (7632-00-0)	
LC50 fish 1	0,19 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
EC50 Daphnia 1	87 mg/l
LC50 fish 2	0,092 - 0,13 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flowthrough])

12.2. Persistence and degradability

JCB Antifreeze HP / Coolant - Readymix	
Persistence and degradability	\ No data available.
ethanediol, ethylene glycol (107-21-1)	
Biochemical oxygen demand (BOD)	0,78 mg/l

12.3. Bioaccumulative potential

JCB Antifreeze HP / Coolant - Readymix	
Partition coefficient n-octanol/water	-1,36
Bioaccumulative potential	No data available.
ethanediol, ethylene glycol (107-21-1)	
Partition coefficient n-octanol/water	-1,93
Log Kow	1,93

Sodium benzoate (532-32-1)	
BCF fish 1	(no bioaccumulation)
Partition coefficient n-octanol/water	-2,13
sodium nitrite (7632-00-0)	
Partition coefficient n-octanol/water	-3,7 (at 25 °C)

12.4. Mobility in soil

JCB Antifreeze HP / Coolant - Readymix	
Mobility in soil	No data available

12.5. Results of PBT and vPvB assessment

JCB Antifreeze HP / Coolant - Readymix	
Results of PBT assessment	No data available
ingredient	
disodium tetraborate pentahydrate, borax pentahydrate (12179-04-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

Other adverse effects : No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Avoid release to the environment. Dispose of empty containers and wastes safely.
Safe handling: see section 7. Refer to manufacturer/supplier for information on recovery/recycling. Recycling is preferred to disposal or incineration. If recycling is not possible, eliminate in accordance with local valid waste disposal regulations. Handle contaminated packages in the same way as the substance itself. Dispose of contaminated materials in accordance with current regulations.

European waste catalogue (2001/573/EC, 75/442/EEC, 91/689/EEC) : This material and its container must be disposed of as hazardous waste
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Special precautions for user : No data available

- Overland transport

Not applicable

- Transport by sea

Not applicable

- Air transport

Not applicable

- Inland waterway transport

Not applicable

- Rail transport

Not applicable

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

Code: IBC : No data available.

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains a substance on the REACH candidate list in concentration ≥ 0.1% or with a lower specific limit: Disodium tetraborate, anhydrous (EC 215-540-4, CAS 12179-04-3)

Contains no REACH Annex XIV substances

15.1.2. National regulations

Germany

Reference to AwSV	Water hazard class (WGK) 2, significant hazard to waters (Classification according to AwSV, Annex 1)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV	Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen	: None of the components are listed
SZW-lijst van mutagene stoffen	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	: disodium tetraborate pentahydrate, borax pentahydrate is listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	: disodium tetraborate pentahydrate, borax pentahydrate is listed

Denmark

Recommendations Danish Regulation	: Young people below the age of 18 years are not allowed to use the product Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

No chemical safety assessment has been carried out for the substance or the mixture by the supplier

SECTION 16: Other information

Abbreviations and acronyms:

	ABM = Algemene beoordelingsmethodiek
	ADN = Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route CLP = Classification, Labelling and Packaging Regulation according to 1272/2008/EC IATA = International Air Transport Association IMDG = International Maritime Dangerous Goods Code LEL = Lower Explosive Limit/Lower Explosion Limit UEL = Upper Explosion Limit/Upper Explosive Limit REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
	BTT = Breakthrough time (maximum wearing time)
	DMEL = Derived Minimal Effect level
	DNEL = Derived No Effect Level
	EC50 = Median Effective Concentration
	EL50 = Median effective level
	ErC50 = EC50 in terms of reduction of growth rate
	ErL50 = EL50 in terms of reduction of growth rate
	EWC = European waste catalogue
	LC50 = Median lethal concentration
	LD50 = Median lethal dose
	LL50 = Median lethal level
	NA = Not applicable
	NOEC = No observed effect concentration
	NOEL: no-observed-effect level
	NOELR = No observed effect loading rate
	NOAEC = No observed adverse effect concentration
	NOAEL = No observed adverse effect level
	N.O.S. = Not Otherwise Specified
	OEL = Occupational Exposure Limits - Short Term Exposure Limits (STELs)
	PNEC = Predicted No Effect Concentration
	Quantitative structure-activity relationship (QSAR)
	STOT = Specific Target Organ Toxicity
	TWA = time weighted average
	VOC = Volatile organic compounds
	WGK = Wassergefährdungsklasse (Water Hazard Class under German Federal Water Management Act)

Sources of key data used to compile the datasheet : Supplier. ECHA (European Chemicals Agency).

Training advice : Training staff on good practice. Manipulations are to be done only by qualified and authorised persons.

Other information : Assessment/classification CLP. Article 9. Calculation method.

Full text of H- and EUH-statements:

Acute Tox. 3 (Oral)	Acute toxicity Category 3
Acute Tox. 4 (Oral)	Acute toxicity Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Aquatic Acute 1
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Ox. Sol. 3	Oxidizing solid Category 3
Repr. 1B	Reproductive toxicity, Category 1B
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H272	May intensify fire; oxidiser.
H301	Toxic if swallowed.

H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H360FD	May damage fertility. May damage the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Classification according to Regulation (EC) No. 1272/2008 [CLP]
Labelling according to Regulation (EC) No. 1272/2008 [CLP]

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