

TRANSFORMER ®

 Version number: GHS 3.0
 Replaces version of: 2019-07-29 (GHS 2)

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

Trade name	TRANSFORMER ®
Registration number (REACH)	not relevant (mixture)
Product code(s)	079-P-4-D

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

Relevant identified uses	Professional use
--------------------------	------------------

1.3 Details of the supplier of the safety data sheet

 Soil Biology
 Unit 30 Branbridges Industrial
 Estate
 East Peckham
 Kent
 TN12 5HF

 Telephone: +441892 883759
 e-mail: info@soilbiology.uk
1.4 Emergency telephone number

Emergency information		
Country	Name	Telephone
United Kingdom	CHEMTREC (UK)	Day or Night +(44) 87 08 20 04 18

SECTION 2: Hazards identification
2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Section	Hazard class	Category	Hazard class and category	Hazard statement
3.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319
4.1C	hazardous to the aquatic environment - chronic hazard	3	Aquatic Chronic 3	H412

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects
 Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

- Signal word warning

- Pictograms

GHS07



- Hazard statements

H319 Causes serious eye irritation.

H412 Harmful to aquatic life with long lasting effects.

TRANSFORMER ®

Version number: GHS 3.0

Replaces version of: 2019-07-29 (GHS 2)

- Precautionary statements

P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P501	Dispose of contents/container to industrial combustion plant.

- Hazardous ingredients for labelling

Orange, sweet, ext., alcohols, secondary C11-15, ethoxylated, Alcohols, C12-14, ethoxylated, sulfates, sodium salts

2.3 Other hazards

This material is combustible, but will not ignite readily.

Results of PBT and vPvB assessment

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

SECTION 3: Composition/information on ingredients
3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of substance	CAS No	EC No	REACH Reg. No	Wt%	Classification acc. to GHS
alcohols, secondary C11-15, ethoxylated	68131-40-8		01-2119560577-29-xxxx	10 – < 25	Acute Tox. 4 / H302 Acute Tox. 4 / H332 Skin Irrit. 2 / H315 Eye Dam. 1 / H318
Orange, sweet, ext.	8028-48-6 68647-72-3	232-433-8	01-2119493353-35-xxxx	10 – < 25	Flam. Liq. 3 / H226 Skin Irrit. 2 / H315 Skin Sens. 1 / H317 Asp. Tox. 1 / H304 Aquatic Chronic 2 / H411
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	68891-38-3	500-234-8	01-2119488639-16-xxxx	5 – < 10	Acute Tox. 4 / H312 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 Aquatic Chronic 3 / H412

For full text of abbreviations: see SECTION 16.

SECTION 4: First aid measures
4.1 Description of first aid measures
General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

TRANSFORMER ®

Version number: GHS 3.0
Replaces version of: 2019-07-29 (GHS 2)

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO₂)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

TRANSFORMER ®

Version number: GHS 3.0
Replaces version of: 2019-07-29 (GHS 2)

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Control of effects

Protect against external exposure, such as

Frost

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling-C [ppm]	Ceiling-C [mg/m ³]	Notation	Source
GB	propane-1,2-diol	57-55-6	WEL		10					particle	EH40/2005
GB	propane-1,2-diol	57-55-6	WEL	150	474					vp	EH40/2005

Notation

Ceiling-C

particle

STEL

TWA

vp

ceiling value is a limit value above which exposure should not occur

as airborne particles

short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

as vapours and particulates

Relevant DNELs of components of the mixture						
Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
alcohols, secondary C11-15, ethoxylated	68131-40-8	DNEL	42.32 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
alcohols, secondary C11-15, ethoxylated	68131-40-8	DNEL	6 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Orange, sweet, ext.	8028-48-6 68647-72-3	DNEL	31.1 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects

TRANSFORMER ®

Version number: GHS 3.0

Replaces version of: 2019-07-29 (GHS 2)

Relevant DNELs of components of the mixture						
Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Orange, sweet, ext.	8028-48-6 68647-72-3	DNEL	8.89 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Orange, sweet, ext.	8028-48-6 68647-72-3	DNEL	185.8 µg/cm ²	human, dermal	worker (industry)	acute - local effects
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	68891-38-3	DNEL	175 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	68891-38-3	DNEL	2,750 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	68891-38-3	DNEL	132 µg/cm ²	human, dermal	worker (industry)	chronic - local effects

Relevant PNECs of components of the mixture						
Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
alcohols, secondary C11-15, ethoxylated	68131-40-8	PNEC	20 µg/l	aquatic organisms	freshwater	short-term (single instance)
alcohols, secondary C11-15, ethoxylated	68131-40-8	PNEC	2 µg/l	aquatic organisms	marine water	short-term (single instance)
alcohols, secondary C11-15, ethoxylated	68131-40-8	PNEC	8.24 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
alcohols, secondary C11-15, ethoxylated	68131-40-8	PNEC	28.1 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
alcohols, secondary C11-15, ethoxylated	68131-40-8	PNEC	2.81 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
alcohols, secondary C11-15, ethoxylated	68131-40-8	PNEC	5.6 mg/kg	terrestrial organisms	soil	short-term (single instance)
Orange, sweet, ext.	8028-48-6 68647-72-3	PNEC	5.4 µg/l	aquatic organisms	freshwater	short-term (single instance)
Orange, sweet, ext.	8028-48-6 68647-72-3	PNEC	0.54 µg/l	aquatic organisms	marine water	short-term (single instance)
Orange, sweet, ext.	8028-48-6 68647-72-3	PNEC	2.1 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Orange, sweet, ext.	8028-48-6 68647-72-3	PNEC	1.3 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Orange, sweet, ext.	8028-48-6 68647-72-3	PNEC	0.13 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Orange, sweet, ext.	8028-48-6 68647-72-3	PNEC	0.261 mg/kg	terrestrial organisms	soil	short-term (single instance)
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	68891-38-3	PNEC	0.24 mg/l	aquatic organisms	freshwater	short-term (single instance)
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	68891-38-3	PNEC	0.024 mg/l	aquatic organisms	marine water	short-term (single instance)

TRANSFORMER ®

Version number: GHS 3.0
Replaces version of: 2019-07-29 (GHS 2)

Relevant PNECs of components of the mixture						
Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	68891-38-3	PNEC	10 g/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	68891-38-3	PNEC	0.917 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	68891-38-3	PNEC	0.092 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	68891-38-3	PNEC	7.5 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Colour	light green
Odour	like citrus

TRANSFORMER ®

Version number: GHS 3.0
 Replaces version of: 2019-07-29 (GHS 2)

Other safety parameters

pH (value)	7 – 8 (20 °C)
Melting point/freezing point	not determined
Initial boiling point and boiling range	160 °C at 1,026 hPa
Flash point	90.3 °C at 725 mmHg
Evaporation rate	not determined
Flammability (solid, gas)	not relevant, (fluid)
Explosive limits	not determined
Vapour pressure	186.4 Pa at 25 °C
Density	0.995 – 1.025 g/cm ³ at 20 °C
Vapour density	this information is not available
Relative density	0.98 – 1.15 at 20 °C (water = 1)
Solubility(ies)	not determined

Partition coefficient

- n-octanol/water (log KOW)	this information is not available
Auto-ignition temperature	235 °C (auto-ignition temperature (liquids and gases))

Viscosity

- Kinematic viscosity	195.1 mm ² /s
- Dynamic viscosity	100 – 200 mPa s at 20 °C
Explosive properties	none
Oxidising properties	none

9.2	Other information	there is no additional information
------------	--------------------------	------------------------------------

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

TRANSFORMER ®

Version number: GHS 3.0
 Replaces version of: 2019-07-29 (GHS 2)

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

Oxidisers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification procedure

The classification is based on tested mixture.

If not otherwise specified the classification is based on:

Animal studies.

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Shall not be classified as acutely toxic.

GHS of the United Nations, annex 4: May be harmful if swallowed or in contact with skin.

- Values for lethality

Acute toxicity			
Exposure route	Endpoint	Value	Species
oral	LD50	5,000 mg/kg	rat
dermal	LD50	>2,000 mg/kg	rat

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
alcohols, secondary C11-15, ethoxylated	68131-40-8	oral	≥2,000 mg/kg
alcohols, secondary C11-15, ethoxylated	68131-40-8	inhalation: vapour	11 mg/l/4h
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	68891-38-3	dermal	≥2,000 mg/kg

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser. OECD 406 - Non sensitizing (Guinea pig).

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

TRANSFORMER ®

Version number: GHS 3.0

Replaces version of: 2019-07-29 (GHS 2)

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Harmful to aquatic life with long lasting effects.

Aquatic toxicity (acute)

Aquatic toxicity (acute)				
Endpoint	Value	Species	Method	Exposure time
LC50	29.9 mg/l	zebra fish	OECD Guideline 203	96 h
EC50	13.4 mg/l	daphnia magna	OECD Guideline 202	72 h
IC50	3.38 mg/l	algae		72 h

Aquatic toxicity (chronic) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
alcohols, secondary C11-15, ethoxylated	68131-40-8	EC50	824 mg/l	microorganisms	3 h
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	68891-38-3	EC50	0.37 mg/l	aquatic invertebrates	21 d
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	68891-38-3	LC50	0.74 mg/l	aquatic invertebrates	21 d

12.2 Persistence and degradability

Degradability of components of the mixture					
Name of substance	CAS No	Process	Degradation rate	Time	Source
alcohols, secondary C11-15, ethoxylated	68131-40-8	oxygen depletion	65 %	28 d	ECHA
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	68891-38-3	DOC removal	100 %	28 d	ECHA

12.3 Bioaccumulative potential

Data are not available.

TRANSFORMER ®

Version number: GHS 3.0
 Replaces version of: 2019-07-29 (GHS 2)

Bioaccumulative potential of components of the mixture			
Name of substance	CAS No	BCF	Log KOW
alcohols, secondary C11-15, ethoxylated	68131-40-8	≥181 – ≤3,010	3.382
Orange, sweet, ext.	8028-48-6 68647-72-3	32 – 156	2.78 – 4.88
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	68891-38-3		0.3 (pH value: 6.1, 23 °C)

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Endocrine disrupting potential

None of the ingredients are listed.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

- | | |
|--|---|
| 14.1 UN number | not subject to transport regulations |
| 14.2 UN proper shipping name | not relevant |
| 14.3 Transport hazard class(es) | none |
| 14.4 Packing group | not assigned to a packing group |
| 14.5 Environmental hazards | non-environmentally hazardous acc. to the dangerous goods regulations |
| 14.6 Special precautions for user | There is no additional information. |
| 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code | The cargo is not intended to be carried in bulk. |

Information for each of the UN Model Regulations

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

Not subject to ADR, RID and ADN.

TRANSFORMER ®

Version number: GHS 3.0
 Replaces version of: 2019-07-29 (GHS 2)

International Maritime Dangerous Goods Code (IMDG)

Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)

Not subject to ICAO-IATA.

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

Dangerous substances with restrictions (REACH, Annex XVII)			
Name of substance	Name acc. to inventory	CAS No	No
TRANSFORMER ®	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		3
Orange, sweet, ext.	flammable / pyrophoric		40

List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

none of the ingredients are listed

Deco-Paint Directive (2004/42/EC)

VOC content	21.45 %
-------------	---------

Directive on industrial emissions (VOCs, 2010/75/EU)

VOC content	20.65 %
-------------	---------

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

none of the ingredients are listed

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

none of the ingredients are listed

National inventories

Country	Inventory	Status
EU	REACH Reg.	all ingredients are listed

Legend

REACH Reg. REACH registered substances

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

TRANSFORMER ®

Version number: GHS 3.0
Replaces version of: 2019-07-29 (GHS 2)

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.2	- Hazardous ingredients for labelling: Orange, sweet, ext., alcohols, secondary C11-15, ethoxylated, Alcohols, C12-14, ethoxylated, sulfates, sodium salts	- Hazardous ingredients for labelling: Orange, sweet, ext., alcohols, secondary C11-15, ethoxylated, Alcohols, C12-14, ethoxylated, sulfates, sodium salts	yes
3.2		Description of the mixture: change in the listing (table)	yes
8.1		Relevant DNELs of components of the mixture: change in the listing (table)	yes
8.1		Relevant PNECs of components of the mixture: change in the listing (table)	yes
11.1		Acute toxicity estimate (ATE) of components of the mixture: change in the listing (table)	yes
12.1		Aquatic toxicity (chronic) of components of the mixture: change in the listing (table)	yes
12.2		Degradability of components of the mixture: change in the listing (table)	yes
12.3		Bioaccumulative potential of components of the mixture: change in the listing (table)	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
Asp. Tox.	Aspiration hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)

TRANSFORMER ®

Version number: GHS 3.0

Replaces version of: 2019-07-29 (GHS 2)

Abbr.	Descriptions of used abbreviations
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
log KOW	n-Octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitisation
STEL	Short-term exposure limit
SVHC	Substance of Very High Concern
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

TRANSFORMER ®

Version number: GHS 3.0

Replaces version of: 2019-07-29 (GHS 2)

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.