

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : ZipChip Charge Variant Analysis Additive

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

##### 1.2.1. Relevant identified uses

Main use category : Professional use  
Use of the substance/mixture : For research and development use only.  
Function or use category : Laboratory chemicals

##### 1.2.2. Uses advised against

Restrictions on use : Not for use in diagnostic procedures.

#### 1.3. Details of the supplier of the safety data sheet

##### Manufacturer

908 Devices  
645 Summer St  
02210 Boston, MA  
USA  
T 1 (857) 254 - 1500  
[908devices.com](http://908devices.com)

#### 1.4. Emergency telephone number

Emergency number : 1 (844) 908 - 4357

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 3 H226

Full text of hazard classes, H- and EUH-statements: see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

Signal word (CLP) : Warning  
Hazard statements (CLP) : H226 - Flammable liquid and vapour.  
Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P240 - Ground and bond container and receiving equipment.  
P242 - Use non-sparking tools.  
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .  
P403 - Store in a well-ventilated place.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

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Unknown acute toxicity (CLP) - SDS : 1% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)  
1% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)  
1% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Vapours))  
Unknown hazards to the aquatic environment (CLP) : Contains 1 % of components with unknown hazards to the aquatic environment

### 2.3. Other hazards

Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Isopropyl alcohol substance with national workplace exposure limit(s) (BE, DK, FR, DE)	CAS-No.: 67-63-0 EC-No.: 200-661-7 EC Index-No.: 603-117-00-0	< 8	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Dimethyl sulfoxide substance with national workplace exposure limit(s) (DK, DE)	CAS-No.: 67-68-5 EC-No.: 200-664-3	< 4	Not classified.

Full text of H- and EUH-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash clothing before re-using. Get medical attention immediately if irritation develops and persists.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

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

Symptoms/effects after inhalation : May cause irritation to the respiratory tract.

Symptoms/effects after skin contact : May cause skin irritation. Repeated exposure may cause skin dryness or cracking.

Symptoms/effects after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

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

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Water spray. Dry chemical powder. Alcohol foam. Carbon dioxide.  
Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

#### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Flammable liquid and vapour. Products of combustion may include, and are not limited to: oxides of carbon.  
Explosion hazard : May form flammable/explosive vapour-air mixture. Heavier than air, vapours may travel long distances along ground, ignite and flash back to source.

#### 5.3. Advice for firefighters

- Firefighting instructions : Move containers away from the fire area if this can be done without risk. Cool closed containers exposed to fire with water spray. Prevent runoff from entering water courses, sewers and basements.  
Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Use special care to avoid static electric charges. Remove all sources of ignition.

##### 6.1.1. For non-emergency personnel

No additional information available

##### 6.1.2. For emergency responders

No additional information available

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters.

#### 6.3. Methods and material for containment and cleaning up

- For containment : Stop leak if safe to do so. Remove ignition sources. Absorb and/or contain spill with inert material (sand, vermiculite or other appropriate material), then place in suitable container. Do not flush into surface water or sewer system. Wear recommended personal protective equipment.  
Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Provide ventilation.

#### 6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.  
Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Take precautionary measures against static discharge. Use only non-sparking tools. Use only outdoors or in a well-ventilated area.  
Hygiene measures : Wash contaminated clothing before reuse. Always wash hands after handling the product.

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### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Proper grounding procedures to avoid static electricity should be followed.
Storage conditions	: Keep out of the reach of children. Keep container tightly closed. Do not store in unlabelled containers. Store in dry, cool, well-ventilated area. Keep cool. Keep out of direct sunlight. Containers which are opened should be properly resealed and kept upright to prevent leakage. Protect from physical damage.

### 7.3. Specific end use(s)

Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

Isopropyl alcohol (67-63-0)	
<b>Belgium - Occupational Exposure Limits</b>	
Local name	Alcool isopropylique # Isopropylalcohol
OEL TWA	500 mg/m <sup>3</sup>
OEL TWA	200 ppm
OEL STEL	1000 mg/m <sup>3</sup>
OEL STEL	400 ppm
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021
<b>Denmark - Occupational Exposure Limits</b>	
Local name	Isopropylalkohol (Isopropanol; 2-Propanol; sec-Propylalkohol)
OEL TWA [1]	490 mg/m <sup>3</sup>
OEL TWA [2]	200 ppm
OEL STEL	980 mg/m <sup>3</sup>
OEL STEL	400 ppm
Regulatory reference	BEK nr 202 af 21/02/2023
<b>France - Occupational Exposure Limits</b>	
Local name	Alcool isopropylique
VLE (OEL C/STEL)	980 mg/m <sup>3</sup>
VLE (OEL C/STEL) [ppm]	400 ppm
Remark	Valeurs recommandées/admises
Regulatory reference	Circulaire du Ministère du travail (réf.: INRS ED 984, 2016)
<b>Germany - Occupational Exposure Limits (TRGS 900)</b>	
Local name	Propan-2-ol
AGW (OEL TWA) [1]	500 mg/m <sup>3</sup> (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
AGW (OEL TWA) [2]	200 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Peak exposure limitation factor	2(II)

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Isopropyl alcohol (67-63-0)	
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Regulatory reference	TRGS900
Germany - Biological limit values (TRGS 903)	
Local name	Propan-2-ol
Biological limit value	25 mg/l Parameter: Acetone - Medium: whole blood - Sampling time: end of shift 25 mg/l Parameter: Acetone - Medium: urine - Sampling time: end of shift
Regulatory reference	TRGS 903
Dimethyl sulfoxide (67-68-5)	
Denmark - Occupational Exposure Limits	
OEL TWA [1]	160 mg/m <sup>3</sup>
OEL TWA [2]	50 ppm
OEL STEL	320 mg/m <sup>3</sup>
OEL STEL	100 ppm
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA) [1]	160 mg/m <sup>3</sup> (the risk of damage to the embryo or fetus cannot be excluded even when AGW and BGW values are observed)
AGW (OEL TWA) [2]	50 ppm (the risk of damage to the embryo or fetus cannot be excluded even when AGW and BGW values are observed)
Chemical category	Skin notation

### 8.1.2. Recommended monitoring procedures

Monitoring methods	
Monitoring methods	Consult the relevant monitoring standards for the region.

### 8.1.3. Air contaminants formed

No additional information available

### 8.1.4. DNEL and PNEC

Additional information : Not applicable

### 8.1.5. Control banding

No additional information available

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station. Provide readily accessible eye wash stations and safety showers.

### 8.2.2. Personal protection equipment

#### 8.2.2.1. Eye and face protection

##### Eye protection:

Safety eyewear complying with an approved standard such as the European Standard EN166 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

#### 8.2.2.2. Skin protection

##### Skin and body protection:

Wear suitable protective clothing. Flame retardant and anti-static material recommended.

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### Hand protection:

Chemical resistant gloves (according to European standard NF ISO 374-1 or equivalent)

### 8.2.2.3. Respiratory protection

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. SDSs cannot provide detailed and complete respiratory protection guidelines. Selection of respiratory protection must be done by a qualified person who has assessed the work environment.

### 8.2.2.4. Thermal hazards

#### Thermal hazard protection:

Not required for normal conditions of use.

### 8.2.3. Environmental exposure controls

#### Environmental exposure controls:

Avoid release to the environment.

#### Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless liquid.
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Refer to component values below
Flammability	: Flammable liquid and vapour.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: > 29 °C (84 °F)
Auto-ignition temperature	: Refer to component values below
Decomposition temperature	: Not available
pH	: 5.2 – 5.8
Viscosity, kinematic	: Not available
Solubility	: Miscible.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Refer to component values below
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 0.99
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

Isopropyl alcohol (67-63-0)	
Boiling point	82.3 °C (at 1 atm)
Flash point	12 °C
Auto-ignition temperature	399 °C
Vapour pressure	42 hPa (at 20 °C)

Dimethyl sulfoxide (67-68-5)	
Boiling point	189 °C (at 1013 hPa)

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Dimethyl sulfoxide (67-68-5)	
Flash point	87 °C closed cup
Auto-ignition temperature	215 °C
Vapour pressure	0.55 hPa (at 20 °C)

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No dangerous reactions known under normal conditions of use.

### 10.2. Chemical stability

Stable under normal conditions. May form flammable/explosive vapour-air mixture.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Sparks, heat, open flame and other sources of ignition. Incompatible materials. Direct sunlight.

### 10.5. Incompatible materials

Oxidizing agents. Nitrates. Perchlorates. Sulfuric acid. This material may attack some forms of plastics, rubbers and coatings. Avoid contact with aluminium.

### 10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon. May release flammable gases.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified.

Acute toxicity (dermal) : Not classified.

Acute toxicity (inhalation) : Not classified.

Isopropyl alcohol (67-63-0)	
LD50 oral rat	5840 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	4059 mg/kg
LC50 inhalation rat	> 10000 ppm (Exposure time: 6 h)

Dimethyl sulfoxide (67-68-5)	
LD50 oral rat	28300 mg/kg
LD50 dermal rat	40000 mg/kg
LC50 inhalation rat	> 5.33 mg/l/4h

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Unknown acute toxicity (CLP) - SDS	: 1% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 1% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 1% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Vapours))
Skin corrosion/irritation	: Not classified. pH: 5.2 – 5.8
Additional information	: Based on available data, the classification criteria are not met.
Serious eye damage/irritation	: Not classified. pH: 5.2 – 5.8
Additional information	: Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	: Not classified.
Additional information	: Based on available data, the classification criteria are not met.
Germ cell mutagenicity	: Not classified.
Additional information	: Based on available data, the classification criteria are not met.
Carcinogenicity	: Not classified.
Additional information	: Based on available data, the classification criteria are not met.

### Isopropyl alcohol (67-63-0)

IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified.
Additional information	: Based on available data, the classification criteria are not met.
STOT-single exposure	: Not classified.
Additional information	: Based on available data, the classification criteria are not met.

### Isopropyl alcohol (67-63-0)

STOT-single exposure	May cause drowsiness or dizziness.
STOT-repeated exposure	: Not classified.
Additional information	: Based on available data, the classification criteria are not met.

### Dimethyl sulfoxide (67-68-5)

LOAEC (inhalation, rat, dust/mist/fume, 90 days)	2.783 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study), Guideline: EPA OPPTS 870.3465 (90-Day Inhalation Toxicity)
NOAEL (oral, rat, 90 days)	≥ 1000 mg/kg bodyweight Animal: rat, Guideline: other:OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)

Aspiration hazard	: Not classified.
Additional information	: Based on available data, the classification criteria are not met.

### Dimethyl sulfoxide (67-68-5)

Viscosity, kinematic	1.945 mm <sup>2</sup> /s
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## 11.2. Information on other hazards

### 11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties	: The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %
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### 11.2.2. Other information

Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye
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## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: May cause long-term adverse effects in the aquatic environment.
Unknown hazards to the aquatic environment (CLP)	: Contains 1 % of components with unknown hazards to the aquatic environment
Hazardous to the aquatic environment, short-term (acute)	: Not classified.



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Hazardous to the aquatic environment, long-term (chronic) : Not classified.

Isopropyl alcohol (67-63-0)	
LC50 - Fish [1]	10000 mg/l Test organisms (species): Pimephales promelas
LC50 - Fish [2]	9640 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	13299 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h - Algae [1]	> 1000 mg/l (Species: Desmodesmus subspicatus)
EC50 96h - Algae [1]	> 1000 mg/l (Species: Desmodesmus subspicatus)

Dimethyl sulfoxide (67-68-5)	
LC50 - Fish [1]	34000 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
LC50 - Fish [2]	33 – 37 g/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 - Crustacea [1]	24.6 g/l Test organisms (species): Daphnia magna

### 12.2. Persistence and degradability

ZipChip Charge Variant Analysis Additive	
Persistence and degradability	Not established.

### 12.3. Bioaccumulative potential

ZipChip Charge Variant Analysis Additive	
Bioaccumulative potential	Not established.

Isopropyl alcohol (67-63-0)	
Partition coefficient n-octanol/water	0.05 (at 25 °C)

Dimethyl sulfoxide (67-68-5)	
Partition coefficient n-octanol/water	-1.35 (at 20 °C (at pH 7))

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

ZipChip Charge Variant Analysis Additive	
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. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

### 12.7. Other adverse effects

Additional information : No other effects known

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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

- Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. The generation of waste should be avoided or minimized wherever possible.
- Additional information : Handle empty containers with care because residual vapours are flammable.

### SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

#### 14.1. UN number or ID number

- UN-No. (ADR) : UN 1993  
UN-No. (IMDG) : UN 1993  
UN-No. (IATA) : UN 1993

#### 14.2. UN proper shipping name

- Proper Shipping Name (ADR) : FLAMMABLE LIQUID, N.O.S. (ISOPROPYL ALCOHOL)  
Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, N.O.S. (ISOPROPYL ALCOHOL)  
Proper Shipping Name (IATA) : Flammable liquid, n.o.s. (Isopropyl alcohol)

#### 14.3. Transport hazard class(es)

##### ADR

- Transport hazard class(es) (ADR) : 3  
Danger labels (ADR) : 3



##### IMDG

- Transport hazard class(es) (IMDG) : 3  
Danger labels (IMDG) : 3



##### IATA

- Transport hazard class(es) (IATA) : 3  
Danger labels (IATA) : 3



#### 14.4. Packing group

- Packing group (ADR) : III  
Packing group (IMDG) : III  
Packing group (IATA) : III

#### 14.5. Environmental hazards

- Dangerous for the environment : No  
Marine pollutant : No  
Other information : No supplementary information available.

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### 14.6. Special precautions for user

Special transport precautions : Do not handle until all safety precautions have been read and understood.

#### Overland transport

Limited quantities (ADR) : 5l

#### Transport by sea

Limited quantities (IMDG) : 5 L

#### Air transport

PCA limited quantity max net quantity (IATA) : 10L

PCA max net quantity (IATA) : 60L

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

##### REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

##### REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

##### REACH Candidate List (SVHC)

Contains no REACH candidate substance.

##### PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

##### POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

##### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

##### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

##### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

#### 15.1.2. National regulations

##### Belgium

Belgian National Regulations : Not determined.

##### France

Occupational diseases	
Code	Description
RG 84	Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols, glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamine; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

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### Germany

Employment restrictions	: Observe restrictions according Act on the Protection of Working Mothers (MuSchG). Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).
Water hazard class (WGK)	: WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1).
Storage class (LGK, TRGS 510)	: LGK 3 - Flammable liquids.
Hazardous Incident Ordinance (12. BImSchV)	: Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

### Italy

Italian National Regulations	: Not determined.
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### Netherlands

SZW-lijst van kankerverwekkende stoffen	: None of the components are listed
SZW-lijst van mutagene stoffen	: None of the components are listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	: None of the components are listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	: None of the components are listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	: None of the components are listed

### Denmark

Classification remarks	: Emergency management guidelines for the storage of flammable liquids must be followed
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## 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
14	Transport information	Modified	V1.1
SDS	Name	Modified	V1.1

### Abbreviations and acronyms:

°C – Degrees Celsius
°F – Degrees Fahrenheit
ADR – European Agreement concerning the International Carriage of Dangerous Goods by Road.
ACGIH – American Conference of Governmental Industrial Hygienists
ATE – Acute Toxicity Estimate
BCF – Bioconcentration Factor
BEI – Biological Exposure Index
CAS – Chemical Abstracts Service
CLP – Regulation (EC) No 1272/2008 on the Classification, Labeling and Packaging of substances and mixtures.
CMR – Carcinogen, Mutagen, Reproductive toxin
cP – centipoise (unit of dynamic viscosity)
cSt – centistokes (unit of kinematic viscosity)
DNEL – Derived No-effect Level
DMEL – Derived Minimal Effect Level
EC50 – Half maximal effective concentration
ECHA – European Chemicals Agency
EC-No. – European Community number
EU – European Union
GHS – Globally Harmonized System of Classification and Labelling of Chemicals
h – Hours
IATA – International Air Transport Association
IC50 – Inhibition concentration
IDLH – Immediately Dangerous to Life or Health
IMDG – International Maritime Dangerous Goods

# ZipChip Charge Variant Analysis Additive

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### Abbreviations and acronyms:

IOELV – Indicative Occupational Exposure Limit Value  
KIFS – Swedish Chemicals Agency's (KemI's) Code of Statutes  
kPa – kilopascal  
Koc – Adsorption Coefficient  
Kow – Octanol-Water Partition Coefficient  
LC50 – Median Lethal Concentration  
LD50 – Median Lethal Dose  
LOAEL – Lowest Observed Adverse Effect level  
mg/l – Milligram per liter  
mg/kg – Milligram per kilogram  
mg/m<sup>3</sup> – Milligram per cubic meter  
Min – Minutes  
NIOSH – National Institute for Occupational Safety and Health  
NOEC – No Observed Effect Concentration  
NO(A)EL – No Observed (Adverse) Effect Level  
N.O.S. – Not Otherwise Specified  
OEL – Occupational Exposure Limit  
PBT - Persistent, Bioaccumulative and Toxic  
PCN – Poison Centre Notification  
PNEC – Predicted No Effect Concentration  
ppm – Parts per million  
PVC – Polyvinyl chloride  
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006  
RID – European Agreement concerning the International Carriage of Dangerous Goods by Rail  
SDS – Safety Data Sheet  
STEL – Short Term Exposure Limit  
STOT – Specific Target Organ Toxicity  
SVHC – Substance of Very High Concern (CMR, vPvB, PBT)  
TDI – Tolerable Daily Intake  
TLV – Threshold Limit Value  
TWA – Time Weighted Average  
UFI – Unique Formulation Identifier  
UN – United Nations  
vPvB - Very Persistent and Very Bioaccumulative  
WEL – Workplace Exposure Limit  
WGK – Wassergefährdungsklasse – German water quality classification

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

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### Full text of H- and EUH-statements:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

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### Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Flam. Liq. 3	H226	On basis of test data
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Safety Data Sheet (SDS), EU - Nexreg 2023

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