

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

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.

ZipChip Charge Variant Analysis Additive

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

- 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

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) (GB)	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

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).

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.

ZipChip Charge Variant Analysis Additive

Safety Data Sheet

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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.

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.

ZipChip Charge Variant Analysis Additive

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

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)	
United Kingdom - Occupational Exposure Limits	
Local name	Propan-2-ol
WEL TWA (OEL TWA) [1]	999 mg/m ³
WEL TWA (OEL TWA) [2]	400 ppm
WEL STEL (OEL STEL)	1250 mg/m ³
WEL STEL (OEL STEL) [ppm]	500 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

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.

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.

ZipChip Charge Variant Analysis Additive

Safety Data Sheet

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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
Appearance	: Colourless.
Colour	: Colourless liquid.
Odour	: No data available
Odour threshold	: No data available
pH	: 5.2 – 5.8
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 29 °C (84 °F)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable liquid and vapour.
Vapour pressure	: No data available
Relative vapour density at 20°C	: No data available
Relative density	: 0.99
Solubility	: Miscible.
Partition coefficient n-octanol/water	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

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.

ZipChip Charge Variant Analysis Additive

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

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 toxicological effects

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)

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
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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.
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STOT-repeated exposure : Not classified.

Additional information : Based on available data, the classification criteria are not met.

Aspiration hazard : Not classified.

Additional information : Based on available data, the classification criteria are not met.

Other information : Likely routes of exposure: ingestion, inhalation, skin and eye

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

ZipChip Charge Variant Analysis Additive

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

Hazardous to the aquatic environment, short-term (acute) : Not classified.

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)

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)

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

PBT : No
vPvB : No

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. Other adverse effects

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 %

Additional information : No other effects known

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.

ZipChip Charge Variant Analysis Additive

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

14.1 UN 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.

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

ZipChip Charge Variant Analysis Additive

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

Air transport

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

PCA max net quantity (IATA) : 60L

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

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

United Kingdom

British National Regulations : Not determined.

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

ZipChip Charge Variant Analysis Additive

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

Abbreviations and acronyms:

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
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/m³ – 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

ZipChip Charge Variant Analysis Additive

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

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.

Prepared by : Nexreg Compliance Inc.

www.Nexreg.com



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

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 Annex II 2022

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