

SAFETY DATA SHEET

Based on Directive 2001/58/EC of the Commission of the European Communities

ATABRON 5EC

1. Identification of the substance/preparation and of the company/undertaking

1.1 Identification of the substance or preparation:

Synonyms: none
CAS No. : N.A.
EC index No. : N.A. NFPA code : N.D.
EINECS No. : N.A. Molecular weight : N.A.
RTECS No. : N.A. Formula : N.A.

1.2 Use of the substance or the preparation:

Insecticide

1.3 Company/undertaking identification:

ISK Biosciences Europe S.A.
Avenue Louise 480, Bte 12
B-1050 Brussel
Tel. : +32 2 627 86 11
Fax : +32 2 627 86 00

1.4 Telephone number for emergency:

+32 14 58 45 45
Brandweerinformatiecentrum voor gevaarlijke stoffen (B.I.G.)
Technische Schoolstraat 43A, B-2440 Geel

2. Composition/information on ingredients

Hazardous ingredients	CAS No. EINECS/ELINCS No.	Conc. in %	Hazard symbol	Risks (R-phrases)
chlorofluazuron	71422-67-8 -	5	N	50/53 (1)
isophorone	78-59-1 201-126-0	25	Xn	21/22-36/37-40 (1)
low boiling point naphtha, unspecified (conc benzene <0.1%)	64742-95-6 265-199-0	20	F+;Xn;N	12-38-51/53-65-67 (1)
naphthalene	91-20-3 202-049-5	<2	Xn;N	22-50/53 (1)
1,2,4-trimethylbenzene	95-63-6 202-436-9	<0.3	Xn;N	10-20-36/37/38-51/53 (1)
N-methyl-2-pyrrolidone	872-50-4 212-828-1	10	Xi	36/38 (1)
alkanes, C10-13, chloro	85535-84-8 287-476-5	30	Xn;N	40-50/53 (1)

(1) For R-phrases in full: see heading 16

3. Hazards identification

- Flammable
- Harmful in contact with skin and if swallowed
- Irritating to eyes, respiratory system and skin
- Limited evidence of a carcinogenic effect
- Vapours may cause drowsiness and dizziness
- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

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4. First aid measures

4.1 Eye contact:

- Consult a doctor/medical service if irritation persists
- Rinse immediately with plenty of water
- Do not apply neutralizing agents

4.2 Skin contact:

- Consult a doctor/medical service if irritation persists
- Wash immediately with lots of water
- Soap may be used
- Remove clothing before washing

4.3 After inhalation:

- Consult a doctor/medical service if breathing problems develop
- Remove the victim into fresh air
- Unconscious: maintain adequate airway and respiration

4.4 After ingestion:

- Consult a doctor/medical service if you feel unwell
- Immediately give lots of water to drink
- Never give water to an unconscious person
- Do not induce vomiting

5. Fire-fighting measures

5.1 Suitable extinguishing media:

- Water spray
- Polyvalent foam
- BC powder
- Carbon dioxide

5.2 Unsuitable extinguishing media:

- Solid water jet ineffective as extinguishing medium

5.3 Special exposure hazards:

- Gas/vapour flammable with air within explosion limits
- On heating/burning: release of toxic and corrosive gases/vapours e.g.: nitrous vapours, hydrofluoric acid, hydrogen chloride, carbon monoxide - carbon dioxide

5.4 Instructions:

- Dilute toxic gases with water spray
- Take account of environmentally hazardous firefighting water
- Use firefighting water moderately and contain it

5.5 Special protective equipment for firefighters:

- Heat/fire exposure: compressed air/oxygen apparatus
- Large spills/in enclosed spaces: compressed air apparatus

6. Accidental release measures

6.1 Personal protection/precautions:

See heading 8.2/8.3/13

6.2 Environmental precautions:

- Prevent soil and water pollution
- Prevent spreading in sewers
- Contain released substance, pump over in suitable containers
- Plug the leak, cut off the supply
- Dam up the liquid spill

6.3 Methods for cleaning up:

- Take up liquid spill into absorbent material, e.g.: sand/earth
- Scoop absorbed substance into closing containers
- Carefully collect the spill/leftovers
- Damaged/cooled tanks must be emptied
- Do not use compressed air for pumping over spills
- Take collected spill to manufacturer/competent authority
- Clean contaminated surfaces with an excess of water

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7. Handling and storage

7.1 Handling:

- Observe strict hygiene
- Use spark-/explosionproof appliances and lighting system
- Do not discharge the waste into the drain
- Remove contaminated clothing immediately
- Clean contaminated clothing

7.2 Storage:

- Keep container tightly closed
- Store at ambient temperature
- Ventilation at floor level
- Provide for a tub to collect spills
- Keep away from: heat sources, ignition sources

Storage temperature	: N.D.	°C
Quantity limits	: N.D.	kg
Storage life	: 730	days
Materials for packaging	:	
- suitable	: no data available	
- to avoid	: no data available	

7.3 Specific uses:

- See information supplied by the manufacturer

8. Exposure controls/Personal protection

8.1 Exposure limit values:

isophorone

TLV-TWA	:	mg/m ³	-	ppm
TLV-STEL	:	mg/m ³	-	ppm
TLV-Ceiling	:	mg/m ³	5	ppm
OES-LTEL	: -	mg/m ³	-	ppm
OES-STEL	: 29	mg/m ³	5	ppm
MAK	: 11	mg/m ³	2	ppm
MAC-Ceiling	: 25	mg/m ³		
VME-8 h	: -	mg/m ³	-	ppm
VLE-15 min.	: 25	mg/m ³	5	ppm
GWBB-8 h	: -	mg/m ³	-	ppm
GWK-15 min.	: -	mg/m ³	-	ppm
Momentary value	: 28	mg/m ³	5	ppm

naphthalene

TLV-TWA	:	mg/m ³	10	ppm
TLV-STEL	:	mg/m ³	15	ppm
OES-LTEL	: 53	mg/m ³	10	ppm
OES-STEL	: 80	mg/m ³	15	ppm
MAK	: -	mg/m ³	-	ppm
TRK	: 50	mg/m ³	10	ppm
MAC-TGG 8 h	: 50	mg/m ³		
MAC-TGG 15 min.	: 80	mg/m ³		
VME-8 h	: 50	mg/m ³	10	ppm
VLE-15 min.	: -	mg/m ³	-	ppm
GWBB-8 h	: 53	mg/m ³	10	ppm
GWK-15 min.	: 80	mg/m ³	15	ppm
EC	: 50	mg/m ³	10	ppm

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1,2,4-trimethylbenzene

TLV-TWA	:		mg/m³	25	ppm
TLV-STEL	:		mg/m³	-	ppm
OES-LTEL	:	125	mg/m³	25	ppm
OES-STEL	:	-	mg/m³	-	ppm
MAK	:	100	mg/m³	20	ppm
MAC-TGG 8 h	:	100	mg/m³		
VME-8 h	:	125	mg/m³	25	ppm
VLE-15 min.	:	-	mg/m³	-	ppm
GWBB-8 h	:	100	mg/m³	20	ppm
GWK-15 min.	:	-	mg/m³	-	ppm
EC	:	100	mg/m³	20	ppm
EC-STEL	:	-	mg/m³	-	ppm

N-methyl-2-pyrrolidone

OES-LTEL	:	103	mg/m³	25	ppm
OES-STEL	:	309	mg/m³	75	ppm
MAK	:	80 Dampf	mg/m³	19 Dampf	ppm
MAC-TGG 8 h	:	80 damp	mg/m³		

Sampling methods:

- 1-Methyl-2-Pyrrolidinone	OSHA	CSI
- Hydrocarbons, halogenated (see Specific Compounds)	NIOSH	1003
- Isophorone	OSHA	7
- Petroleum Distillate (Naphthas)	NIOSH	1550
- Petroleum Distillates (Naphtha)	OSHA	48
- Trimethyl Benzene	OSHA	CSI
- Isophorone	NIOSH	2508

8.2 Exposure controls:

8.2.1 Occupational exposure controls:

- Measure the concentration in the air regularly
- Work under local exhaust/ventilation

8.2.2 Environmental exposure controls: see heading 13

8.3 Personal protection:

8.3.1 respiratory protection:

- Insufficient ventilation: wear respiratory protection

8.3.2 hand protection:

- Gloves
- Suitable materials: No data available
- Breakthrough time: N.D.

8.3.3 eye protection:

- Face shield

8.3.4 skin protection:

- Protective clothing
- Suitable materials: No data available

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9. Physical and chemical properties

9.1 General information:

Appearance (at 20°C) : Liquid
Odour : Aromatic
Colour : Yellow

9.2 Important health, safety and environmental information:

pH value : N.D.
Boiling point/boiling range : N.D. °C
Flashpoint : 51 °C
Explosion limits : N.D. vol% (°C)
Vapour pressure (at 20°C) : N.D. hPa
Vapour pressure (at 50°C) : N.D. hPa
Relative density (at 20°C) : 1.0
Water solubility : Miscible with water
Soluble in : No data available
Relative vapour density : > 1
Viscosity : N.D. Pa.s
Partition coefficient n-octanol/water : N.D.
Evaporation rate
ratio to butyl acetate : N.D.
ratio to ether : N.D.

9.3 Other information:

Melting point/melting range : N.D. °C
Auto-ignition point : N.D. °C
Saturation concentration : N.D. g/m³

10. Stability and reactivity

10.1 Conditions to avoid/reactivity:

- No data available

10.2 Materials to avoid:

- Keep away from: heat sources, ignition sources

10.3 Hazardous decomposition products:

- On heating/burning: release of toxic and corrosive gases/vapours e.g.:
nitrous vapours, hydrofluoric acid, hydrogen chloride, carbon monoxide -
carbon dioxide

11. Toxicological information

11.1 Acute toxicity:

isophorone

LD50 oral rat	: 1870	mg/kg
LD50 dermal rat	: N.D.	mg/kg
LD50 dermal rabbit	: 1350	mg/kg
LC50 inhalation rat	: 7	mg/l/4 h
LC50 inhalation rat	: 1238	ppm/4 h

11.2 Chronic toxicity:

isophorone

EC carc. cat.	: 3
Carcinogenicity (TLV)	: A3
Carcinogenicity (MAK)	: 3B
Teratogenicity (MAK)	: C

naphthalene

Carcinogenicity (TLV)	: A4
Carcinogenicity (MAK)	: 2
Mutagenicity (MAK)	: 3B
Teratogenicity (MAK)	: -
IARC classification	: 2B

1,2,4-trimethylbenzene

Teratogenicity (MAK)	: C
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N-methyl-2-pyrrolidone

Teratogenicity (MAK)	: C
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alkanes, C10-13, chloro

EC carc. cat.	: 3
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11.3 Routes of exposure: ingestion, inhalation, eyes and skin

11.4 Acute effects/symptoms:

AFTER INHALATION

- Irritation of the respiratory tract
- Irritation of the nasal mucous membranes

EXPOSURE TO HIGH CONCENTRATIONS:

- Narcosis

AFTER INGESTION

- Risk of aspiration pneumonia

AFTER ABSORPTION OF HIGH QUANTITIES:

- CNS depression

AFTER SKIN CONTACT

- Tingling/irritation of the skin

AFTER EYE CONTACT

- Irritation of the eye tissue

11.5 Chronic effects:

- No certainty about human carcinogenic properties
- Contains substance with uncertain mutagenic properties (naphthalene)
- Contains a substance of group C (MAK-Schwangerschaftsgruppe) (isophorone, N-methyl-2-pyrrolidone)

12. Ecological information

12.1 Ecotoxicity:

chlorofluazuron:

- LC50 (96 h) : >1.16 mg/l (SALMO GAIRDNERI/ ONCORHYNCHUS MYKISS)
- EC50 (48 h) : 0.01/.96 ppb (DAPHNIA MAGNA)
- EC50 (288 h) : >1.8 mg/l (SELENASTRUM CAPRICORNUTUM)

naphthalene:

- LC50 (96 h) : 1.6 mg/l (SALMO GAIRDNERI/ ONCORHYNCHUS MYKISS)
- EC50 (48 h) : 2.16 mg/l (DAPHNIA MAGNA)
- EC50 (72 h) : 0.4 mg/l (SKELETONEMA COSTATUM)

1,2,4-trimethylbenzene:

- LC50 (96 h) : 7.72 mg/l (PIMEPHALES PROMELAS)
- EC50 (48 h) : 3.6 mg/l (DAPHNIA MAGNA)
- EC50 (72 h) : 1 mg/l (ALGAE)

12.2 Mobility:

- Volatile organic compounds (VOC): > 35%
- Miscible with water

For other physicochemical properties see heading 9

12.3 Persistence and degradability:

- biodegradation BOD₅ : N.D. % ThOD
- water : - No data available
- soil : T ½: N.D. days

12.4 Bioaccumulative potential:

- log P_{ow} : N.D.
- BCF : N.D.

12.5 Other adverse effects:

- WGK : 3 (Classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999)
- Effect on the ozone layer : Not dangerous for the ozone layer (1999/45/EC)
- Greenhouse effect : no data available
- Effect on waste water purification : no data available

13. Disposal considerations

13.1 Provisions relating to waste:

- Waste material code (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 02 01 08* (agrochemical waste containing dangerous substances)
- Waste material code (Flanders): 015, 035
- Hazardous waste (91/689/EEC)

13.2 Disposal methods:

- Incinerate under surveillance
- Do not discharge into drains or the environment
- Do not discharge into surface water (2000/60/EC, Council Decision 2455/2001/EC, O.J. L331 of 15/12/2001)

13.3 Packaging/Container:

- Waste material code packaging (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 15 01 10* (packaging containing residues of or contaminated by dangerous substances)

14. Transport information

30
1993

14.1 Classification of the substance in compliance with UN Recommendations

UN number : 1993
 CLASS : 3
 SUB RISKS : -
 PACKING : III
 PROPER SHIPPING NAME :
 UN 1993, Flammable liquid, n.o.s., Special provision 640E
 (low boiling point naphtha, unspecified (conc benzene <0.1%))

14.2 ADR (transport by road)

CLASS : 3
 PACKING : III
 DANGER LABEL TANKS : 3
 DANGER LABEL PACKAGES : 3

14.3 RID (transport by rail)

CLASS : 3
 PACKING : III
 DANGER LABEL TANKS : 3
 DANGER LABEL PACKAGES : 3

14.4 ADNR (transport by inland waterways)

CLASS : 3
 PACKING : III
 DANGER LABEL TANKS : 3
 DANGER LABEL PACKAGES : 3

14.5 IMDG (maritime transport)

CLASS : 3
 SUB RISKS : -
 PACKING : III
 MFAG : -
 EMS : F-E, S-E
 MARINE POLLUTANT : P

14.6 ICAO (air transport)

CLASS : 3
 SUB RISKS : -
 PACKING : III
 PACKING INSTRUCTIONS PASSENGER AIRCRAFT : 309/Y309
 PACKING INSTRUCTIONS CARGO AIRCRAFT : 310

14.7 Special precautions in connection with transport : none

14.8 Limited quantities (LQ) :

When substances and their packaging meet the conditions established by ADR/RID/ADNR in chapter 3.4, **only** the following prescriptions shall be complied with:
 each package shall display a diamond-shaped figure with the following inscription:
 - 'UN 1993'
 or, in the case of different goods with different identification numbers within a single package:
 - the letters 'LQ'

15. Regulatory information

Classification according to directives 67/548/EEC and 1999/45/EC



Harmful



Dangerous for the environment

contains: alkanes, C10-13, chloro; isophorone

- R10 : Flammable
R21/22 : Harmful in contact with skin and if swallowed
R36/37/38 : Irritating to eyes, respiratory system and skin
R40 : Limited evidence of a carcinogenic effect
R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R67 : Vapours may cause drowsiness and dizziness
- S(02) : (Keep out of reach of children)
S23 : Do not breathe vapour
S35 : This material and its container must be disposed of in a safe way
S36/37 : Wear suitable protective clothing and gloves
S46 : If swallowed, seek medical advice immediately and show this container or label
S57 : Use appropriate containment to avoid environmental contamination

16. Other information

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

- N.A.** = NOT APPLICABLE
N.D. = NOT DETERMINED
(*) = INTERNAL CLASSIFICATION (NFPA)

(**) Labelling:

The labelling of the substance described in this MSDS complies with the provisions of Directive 1999/45/EC of 31 May 1999, published in the Official Journal of the European Communities L 200 of 30/07/1999. This Directive replaces Directive 88/379/EEC of 7 June 1988, published in the Official Journal of the European Communities L 187 of 16/07/1988.

Member States shall apply the laws, regulations and administrative provisions referred to in article 22 of this Directive:

- (a) to preparations not within the scope of Directive 91/414/EEC or Directive 98/8/EC as from 30 July 2002; and
(b) to preparations within the scope of Directive 91/414/EEC or Directive 98/8/EC as from 30 July 2004.

Exposure limits:

- TLV** : Threshold Limit Value - ACGIH USA 2003
OES : Occupational Exposure Standards - United Kingdom 2003
MEL : Maximum Exposure Limits - United Kingdom 2003
MAK : Maximale Arbeitsplatzkonzentrationen - Germany 2002
TRK : Technische Richtkonzentrationen - Germany 2002
MAC : Maximale aanvaarde concentratie - The Netherlands 2003
VME : Valeurs limites de Moyenne d'Exposition - France 1999
VLE : Valeurs limites d'Exposition à court terme - France 1999
GWBB : Grenswaarde beroepsmatige blootstelling - Belgium 2002
GWK : Grenswaarde kortstondige blootstelling - Belgium 2002
EC : Indicative occupational exposure limit values - directive 2000/39/EC

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I : Inhalable fraction = **T**: Total dust = **E**: Einatembarer Aerosolanteil
R : Respirable fraction = **A**: Alveolengängiger Aerosolanteil/Alveolar dust
C : Ceiling limit

Chronic toxicity:

K : List of the carcinogenic substances and processes - The Netherlands 2003

Full text of any R-phrases referred to under heading 2:

R10 : Flammable
R12 : Extremely flammable
R20 : Harmful by inhalation
R21/22 : Harmful in contact with skin and if swallowed
R22 : Harmful if swallowed
R36/37 : Irritating to eyes and respiratory system
R36/37/38 : Irritating to eyes, respiratory system and skin
R36/38 : Irritating to eyes and skin
R38 : Irritating to skin
R40 : Limited evidence of a carcinogenic effect
R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R51/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R65 : Harmful: may cause lung damage if swallowed
R67 : Vapours may cause drowsiness and dizziness