SAFETY DATA SHEET

Based on Regulation (EC) No 1907/2006 (REACH) Article 31 and Annex II

CHIKARA

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

1.1 Identification of the substance or preparation:

Product name : CHIKARA
Synonyms : none

CAS No. : N.A.
EC index No. : N.A.
EINECS No. : N.A.
RTECS No. : N.A.

NFPA code : N.D.
Molecular weight : N.A.
Formula : N.A.

1.2 Use of the substance/preparation:

- Herbicide

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 Emergency telephone:

+32 14 58 45 45 (24h/24h)
Information centre on dangerous goods (BIG)
Technische Schoolstraat 43A, B-2440 Geel, Belgium

2. Hazards identification

- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

3. Composition/information on ingredients

Hazardous ingredients	CAS No. EINECS/ELINCS No.	Conc. (%)	Hazards (R-phrases)	Hazard symbol
FLAZASULFURON	104040-78-0	25	50/53 (1)	N

(1) For R-phrases in full: see heading 16
(2) Substance with a Community workplace exposure limit
(3) PBT-substance

4. First aid measures

4.1 After inhalation:

- Remove the victim into fresh air
- Respiratory problems: consult a doctor/medical service

4.2 Skin contact:

- Rinse with water
- Soap may be used
- Take victim to a doctor if irritation persists

4.3 Eye contact:

- Rinse with water
- Take victim to an ophtalmologist if irritation persists

4.4 After ingestion:

- Rinse mouth with water
- Do not induce vomiting
- Consult a doctor/medical service if you feel unwell

5. Fire-fighting measures

5.1 Suitable extinguishing media:
- Water spray
- Polyvalent foam
- ABC powder
- Carbon dioxide

5.2 Unsuitable extinguishing media:
- Solid water jet ineffective as extinguishing medium

5.3 Special exposure hazards:
- On heating/burning: release of toxic and corrosive gases/vapours e.g.: nitrous vapours, hydrofluoric acid, sulphur oxides, 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 fire-fighters:
- Heat/fire exposure: compressed air/oxygen apparatus
- Dust cloud production: compressed air/oxygen apparatus

6. Accidental release measures

6.1 Personal precautions:
See heading 8.2/13

6.2 Environmental precautions:
- Prevent soil and water pollution
- Prevent spreading in sewers
- Contain released substance, pump into suitable containers
- Plug the leak, cut off the supply
- Dam up the solid spill
- Knock down/dilute dust cloud with water spray

6.3 Methods for cleaning up:
- Stop dust cloud by covering with sand/earth
- Scoop solid spill into closing containers
- Carefully collect the spill/leftovers
- Clean contaminated surfaces with an excess of water
- Wash clothing and equipment after handling

7. Handling and storage

7.1 Handling:
- Observe normal hygiene standards
- Avoid raising dust
- Do not discharge the waste into the drain
- Clean contaminated clothing

7.2 Storage:
- Keep container tightly closed
- Keep only in the original container.
- Meet the legal requirements.
- Keep away from: heat sources

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

7.3 Specific use(s):
- See information supplied by the manufacturer for the identified use(s)

8. Exposure controls/Personal protection

8.1 Exposure limit values:

8.1.1 Occupational exposure:

FLAZASULFURON 25% WG

TLV-TWA	:	not listed
TLV-STEL	:	not listed
TLV-Ceiling	:	not listed
OES-LTEL	:	not listed
OES-STEL	:	not listed
MEL-LTEL	:	not listed
MEL-STEL	:	not listed
MAK	:	not listed
TRGS900	:	not listed
MAC-TGG 8 h	:	not listed
MAC-TGG 15 min.	:	not listed
MAC-Ceiling	:	not listed
VME-8 h	:	not listed
VLE-15 min.	:	not listed
GWBB-8 h	:	not listed
GWK-15 min.	:	not listed
Momentary value	:	not listed
EC	:	not listed
EC-STEL	:	not listed

8.1.2 Sampling methods:
- NO DATA AVAILABLE

8.2 Exposure controls:

8.2.1 Occupational exposure controls:
- Work under local exhaust/ventilation

Personal protective equipment:

a) Respiratory protection:
- Dust production: dust mask with filter type P1

b) Hand protection:
- Gloves
  Suitable materials: Rubber, PVC, Plastics

- Breakthrough time: N.D.

c) Eye protection:
- Safety glasses
  -In case of dust production: protective goggles

d) Skin protection:
- Protective clothing
  Suitable materials: Rubber, PVC, Plastics

8.2.2 Environmental exposure controls: see headings 6.2, 6.3 and 13

9. Physical and chemical properties

9.1 General information:

Appearance (at 20°C)	: Grains	
Odour	: Cinnamon	
Colour	: Brown	

9.2 Important health, safety and environmental information:

pH value (at 1%)	: 5.06	
Boiling point/boiling range	: N.D.	**°C**
Flash point/flammability	: N.D.	**°C**
Explosion limits (explosive properties)	: N.D.	**vol%**
Oxidising properties	: N.D.	
Vapour pressure (at 20°C)	: N.D.	**hPa**
Vapour pressure (at 50°C)	: N.D.	**hPa**
Relative density (at 20°C)	: 0.84	
Water solubility	: N.D.	**g/100 ml**
Soluble in	: Acetone, ethylacetate, dichloromethane	
Relative vapour density	: N.D.	
Viscosity (at °C)	: 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 temperature	: N.D.	**°C**
Saturation concentration	: N.D.	**g/m^3**
Specific conductivity	: N.D.	**pS/m**

10. Stability and reactivity

10.1 Conditions to avoid:
- Stable under normal conditions

10.2 Materials to avoid:
- Keep away from: heat sources

10.3 Hazardous decomposition products:
- On heating/burning: release of toxic and corrosive gases/vapours e.g.: nitrous vapours, hydrofluoric acid, sulphur oxides, carbon monoxide - carbon dioxide

11. Toxicological information

11.1 Acute toxicity:

FLAZASULFURON 25% WG

LD50 oral rat	:	4800	**mg/kg**
LD50 dermal rat	:	> 2000	**mg/kg**
LD50 dermal rabbit	:	N.D.	**mg/kg**
LC50 inhalation rat	:	> 6.17	**mg/l/4 h**
LC50 inhalation rat	:	N.D.	**ppm/4 h**

11.2 Chronic toxicity:

FLAZASULFURON 25% WG

EC carc. cat.	:	not listed
EC muta. cat.	:	not listed
EC repr. cat.	:	not listed
Carcinogenicity (TLV)	:	not listed
Carcinogenicity (MAC)	:	not listed
Carcinogenicity (VME)	:	not listed
Carcinogenicity (GWBB)	:	not listed
Carcinogenicity (MAK)	:	not listed
Mutagenicity (MAK)	:	not listed
Teratogenicity (MAK)	:	not listed
IARC classification	:	not listed

11.3 Routes of exposure:

ingestion, inhalation, eyes and skin

11.4 Acute effects/symptoms:

- Unlikely to cause harmful effects

11.5 Chronic effects:

- Not listed in carcinogenicity class (IARC,EC,TLV,MAK)
- Not listed in mutagenicity class (EC,MAK)
- Not classified as toxic to reproduction (EC)

- Unlikely to cause harmful effects

12. Ecological information

12.1 Ecotoxicity:

FLAZASULFURON 25% WG:
- LC50 (96 h) : > 100 mg/l (SALMO GAIRDNERI/ ONCORHYNCHUS MYKISS)
- EC50 (48 h) : > 100 mg/l (DAPHNIA MAGNA)
- EC50 (72 h) : 0.025 mg/l (SELENASTRUM CAPRICORNUTUM)

- **Effect on waste water purification** : no data available

12.2 Mobility:

- **Volatile organic compounds (VOC):** 0%
- No data available

For other physicochemical properties see heading 9

12.3 Persistence and degradability:

- **biodegradation BOD_5** : 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 Results of PBT assessment:
- Not applicable, based on available data.

12.6 Other adverse effects:

- **WGK** : 2 (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

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): 07 04 13* (solid wastes containing dangerous substances)
- Hazardous waste (91/689/EEC)

13.2 Disposal methods:
- Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber
- Do not discharge into surface water

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

14.1 Classification of the substance in compliance with UN Recommendations

UN number	:	3077
CLASS	:	9
SUB RISKS	:	-
PACKING GROUP	:	III

14.2 ADR (transport by road)

CLASS	:	9
PACKING GROUP	:	III
CLASSIFICATION CODE	:	M7
DANGER LABEL TANKS	:	9
DANGER LABEL PACKAGES	:	9
PROPER SHIPPING NAME	:	

Environmentally hazardous substance, solid, n.o.s. (flazasulfuron)

14.3 RID (transport by rail)

CLASS	:	9
PACKING GROUP	:	III
CLASSIFICATION CODE	:	M7
DANGER LABEL TANKS	:	9
DANGER LABEL PACKAGES	:	9
PROPER SHIPPING NAME	:	

Environmentally hazardous substance, solid, n.o.s. (flazasulfuron)

14.4 ADNR (transport by inland waterways)

CLASS	:	9
PACKING GROUP	:	III
CLASSIFICATION CODE	:	M7
DANGER LABEL TANKS	:	9
DANGER LABEL PACKAGES	:	9

14.5 IMDG (maritime transport)

CLASS	:	9
SUB RISKS	:	-
PACKING GROUP	:	III
MFAG	:	-
EMS	:	F-A, S-F
MARINE POLLUTANT	:	P

14.6 ICAO (air transport)

CLASS	:	9
SUB RISKS	:	-
PACKING GROUP	:	III
PACKING INSTRUCTIONS PASSENGER AIRCRAFT	:	911/Y911
PACKING INSTRUCTIONS CARGO AIRCRAFT	:	911

14.7 Special precautions : 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 3077'
or, in the case of different goods with different identification numbers within a single package:
- the letters 'LQ'

15. Regulatory information

15.1 EU legislation:

Classification according to directives 67/548/EEC, 1999/45/EC and 2006/8/EC

Dangerous for the environment

R50/53	:	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
S35	:	This material and its container must be disposed of in a safe way
S57	:	Use appropriate containment to avoid environmental contamination

15.2 National provisions:

Germany:

WGK : 2 (Classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999)

16. Other information

The information provided on this SDS 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)

PBT-substances = persistent, bioaccumulative and toxic substances

Exposure limits:

TLV : Threshold Limit Value - ACGIH USA
WEL : Workplace Exposure Limits - United Kingdom
TRGS 900 : Technische Regel für Gefahrstoffe 900 (Arbeitsplatzgrenzwerte) - Germany
MAK : Maximale Arbeitsplatzkonzentrationen - Germany
MAC : Maximale aanvaarde concentratie - The Netherlands
VME : Valeurs limites de Moyenne d'Exposition - France
VLE : Valeurs limites d'Exposition à court terme - France
GWBB : Grenswaarde beroepsmatige blootstelling - Belgium
GWK : Grenswaarde kortstondige blootstelling - Belgium
EC : Indicative occupational exposure limit values - directive 2000/39/EC

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

a:	aerosol		**r:**	rook/Rauch	(fume)
d:	damp	(vapour)	**st:**	stof/Staub	(dust)
du:	dust		**ve:**	vezel	(fibre)
fa:	Faser	(fibre)	**va:**	vapour	
fi:	fibre		**om:**	oil mist	
fu:	fume		**on:**	olienevel/Ölnebel	(oil mist)
p:	poussière	(dust)	**part:**	particles	

Chronic toxicity:

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

Full text of any R phrases referred to under headings 2 and 3:

R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment