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SECTION 1:	Identification of the substance/mixture and of the company/undertaking
· 1.1 Product iden	tifier
· Trade name: Aci	rylamide/Bis-acrylamide 40% 37.5:1
· Article number:	
· Registration nun	
	ntified uses of the substance or mixture and uses advised against
	24 Scientific research and development
	y PC21 Laboratory chemicals
	e substance / the mixture
Laboratory reager	
Reactive monome	
· Uses advised aga	g aerosol formation or vapour release in excess of the assigned WEL where workers ar
exposed without s	
	a risk of direct contact with eyes/skin where workers are exposed without adequate persona
protective equipm	
	ng the use of incompatible substances - refer to section 10.
	ng extreme heat use advised against.
	workers who may be pregnant or breastfeeding could potentially come into direct contact
with the undiluted	
	ended exclusively for industrial and professional use.
	supplier of the safety data sheet
· Manufacturer/Su	
Severn Biotech Lt	.0.
Unit 2, Park Lane,	
Kidderminster,	
Worcestershire.	
DY11 6TJ	
UK	
Tel: 0044 1562 82	
Fax: 0044 1562 8	
email: info@sever	rnblotecn.com
	tion obtainable from: Product safety department.
• 1.4 Emergency to	
	ublic seeking specific information on poisons should contact:
In England and W In Scotland: NHS	/ales: NHS 111 - dial 111 24 - dial 111
SECTION 2:	Hazards identification
· 2.1 Classification	of the substance or mixture
	cording to Regulation (EC) No 1272/2008
health h	nazard
V	
Muta. 1B H34	40 May cause genetic defects.
	50 May cause cancer.
	61f Suspected of damaging fertility.
-	
STOT RE 1 H3	72 Causes damage to organs through prolonged or repeated exposure.
· · · · · · · · · · · · · · · · · · ·	



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Acute Tox. 4 H302 Harmful if swallowed. Acute Tox. 4 H332 Harmful if inhaled.

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## Safety data sheet

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according to 1907/2006/EC, Article 31 as amended

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	(Contd. of page 1
Skin Irrit.	2 H315 Causes skin irritation.
Eye Irrit.	2 H319 Causes serious eye irritation.
Skin Sens	. 1 H317 May cause an allergic skin reaction.
The produ Hazard p	elements according to Regulation (EC) No 1272/2008 Ict is classified and labelled according to the GB CLP regulation. ictograms GHS07, GHS08 ord Danger
Hazard-d	etermining components of labelling:
acrylamid	e
	ylene Bis Acrylamide
Hazard st	
	32 Harmful if swallowed or if inhaled.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H340	May cause genetic defects.
H350	May cause cancer.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure.
Precautio	nary statements
P260	Do not breathe mist/vapours/spray.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P31	
	51+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
	51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, i present and easy to do. Continue rinsing.
2.3 Other	
	f PBT and vPvB assessment
PBT: Not	applicable.
vPvB: No	t applicable.

• **vPvB:** Not applicable.

## **SECTION 3: Composition/information on ingredients**

#### · 3.2 Chemical characterisation: Mixtures

• Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:				
CAS: 79-06-1	acrylamide	10-50%		
EINECS: 201-173-7	Acute Tox. 3, H301;  Muta. 1B, H340; Carc. 1B, H350;			
Reg.nr.: 01-2119463260-48-XXXX Repr. 2, H361f; STOT RE 1, H372; () Acute Tox. 4, H312;				
	Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319;			
	Skin Sens. 1, H317			
	Note: D, E			
CAS: 110-26-9	N,N-Methylene Bis Acrylamide	<2.5%		
EINECS: 203-750-9				
Reg.nr.: 01-2120745928-38-XXXX Repr. 2, H361; STOT RE 1, H372; () Acute Tox. 4, H312;				
	Acute Tox. 4, H332			
· SVHC				
79-06-1 acrylamide				
• Additional information: For the wording of the listed hazard phrases refer to section 16.				

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## **SECTION 4: First aid measures**

### $\cdot$ 4.1 Description of first aid measures

## · General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

In case of irregular breathing or respiratory arrest provide artificial respiration.

#### · After inhalation:

- In case of inhalation:
- Provide fresh air.
- In case of breathing difficulties administer oxygen.
- No mouth-to-mouth or mouth-to-nose resuscitation. Use respiratory bag or oxygen resuscitation apparatus.
- Do not leave patient unattended.

In case of unconsciousness place patient stably in side position for transportation.

#### · After skin contact:

Immediately wash with water and soap and rinse thoroughly.

May be absorbed through the skin. Seek medical advice.

## · After eye contact:

Check for and remove any contact lenses.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Information for doctor:

Treat symptomatically and supportively.

No specific antidote.

Ingestion may cause central and peripheral nervous system depression. Do not induce vomiting because of the danger of aspiration.

- · 4.2 Most important symptoms and effects, both acute and delayed
- No further relevant information available.
- · 4.3 Indication of any immediate medical attention and special treatment needed
- No further relevant information available.

## **SECTION 5: Firefighting measures**

## · 5.1 Extinguishing media

### · Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Use fire extinguishing methods suitable to surrounding conditions.

• For safety reasons unsuitable extinguishing agents: Water with full jet

• 5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released:

- Carbon monoxide (CO)
- Nitrogen oxides (NOx)

Elevated temperatures or contamination may cause material to polymerise, causing a pressure buildup that may violently rupture tanks or containers.

· 5.3 Advice for firefighters

#### • Protective equipment:

Wear fully protective suit.

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

#### · Additional information

Cool endangered receptacles with water spray.

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Collect contaminated fire fighting water separately. It must not enter the sewage system.

## SECTION 6: Accidental release measures

 $\cdot$  6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation

Wear protective equipment. Keep unprotected persons away.

• 6.2 Environmental precautions:

Do not allow to penetrate the ground/soil.

Do not allow product to reach sewage system or any water course in the undiluted form.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

• 6.3 Methods and material for containment and cleaning up: Contain and collect spillage with non-combustible, absorbent material e.g.sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Ensure adequate ventilation.

• **6.4 Reference to other sections** See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## **SECTION 7: Handling and storage**

## $\cdot$ 7.1 Precautions for safe handling

Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

Safety showers and eye wash facilities should be available at the work area.

Do NOT take work clothes home.

Whenever possible, carcinogenic and mutagenic substances should only be used in closed apparatus. If release of the substance cannot be prevented, then it should be extracted at the point of exit.

· Information about fire - and explosion protection: Keep respiratory protective device available.

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

- · Storage:
- Requirements to be met by storerooms and receptacles: Prevent any seepage into the ground.
   Store only in the original receptacle.
   Keep refrigerated at 4 □ if possible.
- Information about storage in one common storage facility:
- Store away from oxidising agents.
- Store away from reducing agents.
- Store away from metals.
- Store away from foodstuffs.
- Store away from chelating agents.
- · Further information about storage conditions:
- Protect from exposure to the light.
- Keep container tightly sealed.
- Protect from heat and direct sunlight.
- Maximum storage temperature: 23 °C
- Storage class: 6.1 D
- $\cdot$  7.3 Specific end use(s) No further relevant information available.

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8.2 Exposure of Personal prote General prote Do not eat, drin Storing food in A safe system workers must r Take note of as Do not inhale g Keep away from Immediately re Wash hands be Store protective	Additional information: The lists valid during the making were used as basis.				
<ul> <li>8.2 Exposure controls</li> <li>Personal protective equipment:</li> <li>General protective and hygienic measures:</li> <li>Do not eat, drink, smoke or sniff while working.</li> <li>Storing food in the working area is prohibited.</li> <li>A safe system of work must be formulated and followed to ensure safe working with this product. Relevant workers must receive suitable and sufficient training and supervision.</li> <li>Take note of assigned Workplace Exposure Limits.</li> <li>Do not inhale gases / fumes / aerosols.</li> <li>Keep away from foodstuffs, beverages and feed.</li> <li>Immediately remove all soiled and contaminated clothing</li> <li>Wash hands before breaks and at the end of work.</li> <li>Store protective clothing separately.</li> <li>Avoid contact with the eyes and skin.</li> <li>Ensure that eyewash stations and safety showers are close to the workstation location.</li> <li>Depending on the degree of exposure, periodic medical examination is suggested.</li> <li>Respiratory protection:</li> <li>Use suitable respiratory protective device in case of insufficient ventilation.</li> <li>Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and th safe working limits of the selected respirator.</li> <li>If respiratory protection is required, institute a complete respiratory protection program including selection, f testing, training, maintenance and inspection.</li> <li>Protection of hands:</li> </ul>					
Protective gloves. Use gloves tested and approved under appropriate government standards such as NIOSH (US) of EN374 (EU).					

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The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- · Material of gloves
- PVC gloves

Nitrile rubber, NBR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Wash gloves thoroughly before removing.

Immediately discard gloves that are contaminated on the inside.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles conforming to EN166.

· Body protection:



Impervious protective clothing

Do not get on skin or clothing. Wear clothing and footwear that cannot be penetrated by the product. Suitable protective equipment may include: Chemical resistant boots, Chemical resistant apron, Full chemical protective suit with a hood, Chemical protective suit consisting of a jacket and trousers. The jacket should be buttoned up to the neck, sleeves sealed at the gloves, and trouser legs worn outside the boots. These precautions are required to prevent the clothing from accidentally trapping product against the skin.

 $\cdot$  Limitation and supervision of exposure into the environment

Do not allow to enter drains, sewers or watercourses.

· Risk management measures

The operators shall be instructed adequately.

The workplace shall be inspected regularly by competent personnel e.g. the safety representative.

## **SECTION 9: Physical and chemical properties**

• 9.1 Information on basic physical and chemical properties			
· General Information	• •		
· Appearance:			
Form:	Fluid		
Colour:	Clear		
· Odour:	Characteristic		
· Odour threshold:	Not determined.		
· pH-value at 20 °C:	5 - 8		
· Change in condition			
Melting point/freezing point:	Undetermined.		
Initial boiling point and boiling range:	Undetermined.		
· Flash point:	Not applicable.		
· Flammability (solid, gas):	Not applicable.		
· Decomposition temperature:	Not determined.		
· Ignition temperature:	Product is not self-igniting.		
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· Explosive properties:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure at 20 °C:	23 hPa
· Density at 20 °C:	1.0-1.7 g/cm <sup>3</sup>
· Relative density	Not determined.
· Vapour density	Not determined.
• Evaporation rate	Not determined.
· Solubility in / Miscibility with	
water:	Fully miscible.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
• 9.2 Other information	NOTE: The physical data presented above are typical values and should not be construed as a specification.

## **SECTION 10: Stability and reactivity**

- 10.1 Reactivity No further relevant information available.
- · 10.2 Chemical stability May polymerise violently when heated above 50  $\Box$ .
- Thermal decomposition / conditions to be avoided: Elevated temperatures or contamination may cause material to polymerise, causing a pressure buildup that may
- violently rupture tanks or containers. • 10.3 Possibility of hazardous reactions
- Reacts with alkali, amines and strong acids. Reacts violently with oxidising agents.
- **10.4 Conditions to avoid** Heat and static discharge. Temperatures above 50 °C
- **10.5 Incompatible materials:** Strong acids and oxidising agents Reducing agents. Finely powdered metals.
- **10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide Ammonia Nitrogen oxides (NOx)

## **SECTION 11: Toxicological information**

- · 11.1 Information on toxicological effects
- · Acute toxicity
- Harmful if swallowed or if inhaled.

### · LD/LC50 values relevant for classification:

## ATE (Acute Toxicity Estimates)

Oral	LD50	598.9 mg/kg (rat)
Dermal		3,907.5 mg/kg (rat)
Inhalative	LC50/4 h	5.137 mg/l

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crylamide LD50 LD50 N,N-Meth LD50 irritant ef osion/irrit	177 mg/kg (rat)
LD50 N,N-Meth LD50 irritant ef	
N,N-Meth LD50 irritant ef	1 141 max/line (mot)
LD50 irritant ef	1,141 mg/kg (rat)
irritant ef	nylene Bis Acrylamide
	390 mg/kg (rat)
rious eye i ory or skir e an allergi to chroni S OF LON sulting in j al toxicolo OF EXPC e skin and ects (acuto S OF SHO r cause effe	e/irritation rritation. n sensitisation ic skin reaction. c toxicity: G-TERM OR REPEATED EXPOSURE: The substance may have effects on the nerv peripheral nerve damage. gical information: OSURE: The component substances can variously be absorbed into the body by inhalat by ingestion. e toxicity, irritation and corrosivity) RT-TERM EXPOSURE: The product is irritating to the eyes, the skin and the respirate ects on the central nervous system. nogenity, mutagenicity and toxicity for reproduction) icity
peated exp mage to or n hazard	ure Based on available data, the classification criteria are not met. posure rgans through prolonged or repeated exposure. Based on available data, the classification criteria are not met. Cological information
city	
oxicity:	
UAICILY:	
orvlamida	
crylamide	d degradability Readily biodegradable ive potential Product is not expected to bioaccumulate.
	iide mg/ an

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## **SECTION 13: Disposal considerations**

- · 13.1 Waste treatment methods
- · Recommendation
- Recommended Hierarchy of Controls:
- Minimise waste;
- Reuse if not contaminated;
- Recycle, if possible; or
- Safe disposal (if all else fails).

Must not be disposed together with household garbage. Do not allow product to reach sewage system. Contact waste processors for recycling information.

Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

## · Uncleaned packaging:

## · Recommendation:

Container remains hazardous when empty. Continue to observe all precautions.

Disposal must be made according to official regulations.

Do not mix with other waste streams.

Containers, even those that are "empty," may contain residues that can develop flammable vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

 $\cdot$  Recommended cleansing agents: Water, if necessary together with cleansing agents.

14.1 UN-Number ADR/RID/ADN, IMDG, IATA	UN3426
· 14.2 UN proper shipping name · ADR/RID/ADN · IMDG, IATA	UN3426 ACRYLAMIDE SOLUTION ACRYLAMIDE SOLUTION
· 14.3 Transport hazard class(es)	
· ADR/RID/ADN, IMDG, IATA	
· Class	6.1 Toxic substances.
· Label	6.1
· 14.4 Packing group · ADR/RID/ADN, IMDG, IATA	Ш
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user	Warning: Toxic substances.
· Hazard identification number (Kemler code):	60
· EMS Number:	F-A,S-A
· Stowage Category	A
· Stowage Code	SW1 Protected from sources of heat.
· Handling Code	H2 Keep as cool as reasonably practicable
• 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	f Not applicable.

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· Transport/Additional information:	
· ADR/RID/ADN	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
· Transport category	2
· Tunnel restriction code	E
·IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 3426 ACRYLAMIDE SOLUTION, 6.1, III

## **SECTION 15: Regulatory information**

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

- · Poisons Act
- $\cdot$  Regulated explosives precursors
- None of the ingredients is listed.

## · Regulated poisons

None of the ingredients is listed.

#### · Reportable explosives precursors

None of the ingredients is listed.

· Reportable poisons

None of the ingredients is listed.

- · Directive 2012/18/EU
- Named dangerous substances ANNEX I None of the ingredients is listed.
- · National regulations:
- · Information about limitation of use:

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

#### · Other regulations, limitations and prohibitive regulations

### · Substances of very high concern (SVHC) according to UK REACH

79-06-1 acrylamide

• 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## **SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Training hints

This product should only be handled by workers who have received sufficient training in the safe handling and use of chemical products.

#### · Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

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GHS: Globally Harmonised System of Classification and Labelling of Chemicals	
EINECS: European Inventory of Existing Commercial Chemical Substances	
ELINCS: European List of Notified Chemical Substances	
CAS: Chemical Abstracts Service (division of the American Chemical Society)	
DNEL: Derived No-Effect Level (UK REACH)	
PNEC: Predicted No-Effect Concentration (UK REACH)	
LC50: Lethal concentration, 50 percent	
LD50: Lethal dose, 50 percent	
PBT: Persistent, Bioaccumulative and Toxic	
vPvB: very Persistent and very Bioaccumulative	
ATE: Acute toxicity estimate values	
Acute Tox. 3: Acute toxicity – Category 3	
Acute Tox. 4: Acute toxicity – Category 4	
Skin Irrit. 2: Skin corrosion/irritation – Category 2	
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2	
Skin Sens. 1: Skin sensitisation – Category 1	
Muta. 1B: Germ cell mutagenicity – Category 1B	
Carc. 1B: Carcinogenicity – Category 1B	
Repr. 2: Reproductive toxicity – Category 2	
Repr. 2: Reproductive toxicity – Category 2	
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1	
• * Data compared to the previous version altered.	
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