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* 1 Identification		
Product identifier		
[.] Trade name: <u>GC6B / GC4</u>		
• Article number: 32220-3055- • Application of the substance		
Details of the supplier of the Supplier: Alfa Laval Technologies AB SE-221 00 Lund Sweden +46 46 36 65 00 info.se@alfalaval.com	safety data sheet	
	vww.alfalaval.com or in safety o er:	contact your local Alfa Laval Sales data sheet under section 16: Other
* 2 Hazard(s) identification		
Classification of the substan Self-heat. 1 H251 Self-heatin Skin Irrit. 2 H315 Causes sk Eye Irrit. 2A H319 Causes se Skin Sens. 1 H317 May cause	g: may catch fire. in irritation. rious eye irritation.	
Label elements GHS label elements The product is classified and la Hazard pictograms	beled according to the Globally I	Harmonized System (GHS).
· Signal word Danger		
 Hazard-determining compon reaction product: bisphenol-A 700) Hazard statements H251 Self-heating: may catch f H315 Causes skin irritation. H319 Causes serious eye irrita 	-(epichlorhydrin) epoxy resin (n ïre. tion.	umber average molecular weight \leq
P305+P351+P338 If in eyes:	ctive clothing / face protection.	several minutes. Remove contact
	ion or rash occurs: Get medical a	
L		US —

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(Contd. of page 1) P413 Store bulk masses greater than 1 kg at temperatures not exceeding 5°C. P501 Dispose of contents/container in accordance with local/regional/national/ international regulations.

· Other hazards

· Results of PBT and vPvB assessment

- **PBT:** The product is not, nor contains, a substance that is PBT
- **vPvB**: The product is not, nor contains a substance that is, vPvB.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

Description:

 Non-volatile amide (hydrazide)

 CAS: 112945-52-5
 Amorphous silica, crystalline free, synthetic
 2.5-10%

· Dangerous components:

CAS: 25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number source average molecular weight ≤ 700) Acute Tox. 4, H312; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317

4 First-aid measures

· Description of first aid measures

General information:

Immediately remove any clothing soiled by the product.

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

- After inhalation:
- Supply fresh air.
- Seek medical treatment in case of complaints.
- After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· After eye contact:

Rinse cautiously with water for 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If symptoms persist consult doctor.

· After swallowing:

Wash the mouth with water.

If symptoms persist consult doctor.

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

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5 Fire-fighting measures

- Extinguishing media
- · Suitable extinguishing agents:
- Water spray Foam
- Use fire fighting measures that suit the environment.
- For safety reasons unsuitable extinguishing agents: Not applicable.
- · Special hazards arising from the substance or mixture
- During heating or in case of fire poisonous gases are produced.

In case of fire, the following can be released: Nitrogen oxides (NOx)

- Hydrogen chloride (HCl)
- Carbon monoxide and carbon dioxide
- Aldehvde
- Advice for firefighters
- **Protective equipment:** Wear fully protective suit.

Do not inhale explosion gases or combustion gases.

Wear self-contained respiratory protective device.

Additional information

Collect contaminated fire fighting water separately. It must not enter the sewage system. Formation of toxic gases is possible during heating or in case of fire.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures Absorb liquid components with liquid-binding material. Keep away from ignition sources **Environmental precautions:** Do not allow to enter sewers/ surface or ground water. In case of seepage into the ground inform responsible authorities. Send for recovery or disposal in suitable receptacles. Methods and material for containment and cleaning up: Pick up mechanically. **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. Protective Action Criteria for Chemicals · PAC-1: CAS: 25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number 90 mg/m³ average molecular weight \leq 700) CAS: 112945-52-5 Amorphous silica, crystalline free, synthetic 18 mg/m³ · PAC-2:

CAS: 25068-38-6	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin	990 mg/m³
	(number average molecular weight \leq 700)	
CAS: 112945-52-5	Amorphous silica, crystalline free, synthetic	100 mg/m ³

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PAC-3:		(Contd. of page 3)
	reaction product: biophonal A (anishlarhydrin) anavy regin	5.000 mg/m^3
CAS. 25008-38-0	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)	5,900 mg/m²
CAS: 112945-52-5	Amorphous silica, crystalline free, synthetic	630 mg/m³

7 Handling and storage

· Handling:

· Precautions for safe handling

Do not breathe vapour.

Avoid contact with skin and eyes.

Handle and open container with care.

Avoid release to the environment.

This material and its container must be disposed of in a safe way.

See Section 8 for information on personal protection equipment.

· Information about protection against explosions and fires: Substance/product is self ignitable.

· Conditions for safe storage, including any incompatibilities

- · Storage:
- Requirements to be met by storerooms and receptacles: Keep away from heat and direct sunlight. Store in a cool location.
- · Information about storage in one common storage facility: Reacts with amines.
- Further information about storage conditions: Keep receptacle tightly sealed.
- Recommended storage temperature: -18 4 °C
- Specific end use(s)
- Adhesives

Only for trade users / technical specialists

8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see item 7.

· Control parameters

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

• Additional information: The lists that were valid during the creation were used as basis.

- · Exposure controls
- Personal protective equipment:
- General protective and hygienic measures:
- Ensure that washing facilities are available at the work place.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

- Avoid contact with the eyes and skin.
- Use only in well-ventilated areas.

In case of insufficient ventilation, wear suitable respiratory equipment.

· Breathing equipment:

Not necessary if room is well-ventilated.

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(Contd. of page 4) Filter P2 Filter P3 · Protection of hands: Protective gloves 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 Polymere laminate 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. 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

· Limitation and supervision of exposure into the environment

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

Information on basic physical and General Information	chemical properties	
Appearance:		
Form:	Highly viscous	
Color:	Light beige	
Odor:	Characteristic	
Odor threshold:	Not determined.	
pH-value:	Not applicable.	
Change in condition		
Melting point/Melting range:	Undetermined.	
Boiling point/Boiling range:	Undetermined.	
Flash point:	>107 °C (>224.6 °F)	
Flammability (solid, gaseous):	Self-heating: may catch fire.	
Decomposition temperature:	Not determined.	
Auto igniting:	Not determined.	

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 Danger of explosion: 	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Oxidizing properties	Not applicable.
· Vapor pressure:	Not determined.
· Density at 20 °C (68 °F):	1.24 g/cm³ (10.3478 lbs/gal)
Relative density	Not determined.
· Vapor density	Not applicable.
 Evaporation rate 	Not applicable.
· Solubility in / Miscibility with	
Water:	Slightly soluble.
· Partition coefficient (n-octanol/wa	ter): Not determined.
· Viscosity:	
Dynamic at 20 °C (68 °F):	60,000 mPas (Brookfield)
Kinematic:	Not applicable.
· Solvent content:	
VOC content:	0.00 %
· Other information	No further relevant information available.

10 Stability and reactivity

- · Reactivity No further data; see item 7.
- · Chemical stability

Stable under normal temperature conditions and under recommended usage and storage.

- Thermal decomposition / conditions to be avoided: Exothermic thermal decomposition.
- Possibility of hazardous reactions Exothermic polymerization. 130°C · Conditions to avoid Keep away from heat. Keep away from sources of ignition - No smoking. Avoid hardening of large quantities in order to prevent premature reaction (exotherm) with high heat and smoke. Incompatible materials: Reacts with amines. Keep away from acids. Hazardous decomposition products: Nitrogen oxides Carbon monoxide and carbon dioxide Aldehyde Hydrogen chloride (HCl) No further data; see item 7.

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Trade name: GC6B / GC4

11 Toxicological information Information on toxicological effects Acute toxicity: CAS: 25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700) Oral NOAEL 750 mg/kg (Rat) (2 generations) LD/LC50 values that are relevant for classification: 25068-38-6 Epoxy resin system, Bisphenol-A and epichlorhydrin, reaction product, MW<700: LD50: 13600 mg/kg, Oral Rat. LD50: >1200 mg/kg, Dermal Rat. CAS: 25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700) Dermal LD50 >1,600 mg/kg (Rat) Primary irritant effect: on the skin: Irritant to skin and mucous membranes. Causes skin irritation. CAS: 25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700) Irritation of skin | Skin Corrosion/Irritation | 4 (Rabbit) (OECD Guideline 404) on the eye: Irritating effect. Causes serious eye irritation. CAS: 25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700) Irritation of eyes Serious Eye Damage/Irritation (Rabbit) (OECD Guideline 405) · Sensitization: Sensitization possible through skin contact. Additional toxicological information: The product shows the following dangers according to internally approved calculation methods for preparations: Irritant · Carcinogenic categories · IARC (International Agency for Research on Cancer) None of the ingredients is listed. • NTP (National Toxicology Program) None of the ingredients is listed. **OSHA-Ca** (Occupational Safety & Health Administration) None of the ingredients is listed. Germ cell mutagenicity Based on available data, the classification criteria are not met.

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Trade name: GC6B / GC4

12 Ecological information · Toxicity Aquatic toxicity: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. CAS: 25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700) LC50 (96 h) 1.75 mg/L (Fish) (OECD Guideline 203) 220 mg/L (Algae) EC50 EC50 1.1-3.6 mg/L (Daphnia) • Persistence and degradability No further relevant information available. Behavior in environmental systems: · Bioaccumulative potential No further relevant information available. • Mobility in soil No further relevant information available. Ecotoxical effects: · Remark: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Results of PBT and vPvB assessment • **PBT:** Not applicable. · vPvB: Not applicable. · Other adverse effects No further relevant information available. 13 Disposal considerations · Waste treatment methods · Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Hand over to hazardous waste disposers. · Uncleaned packagings: **Recommendation:** Disposal must be made according to official regulations. Packagings that cannot be cleansed are to be disposed of in the same manner as the product. 14 Transport information

· UN-Number · DOT, ADR, IMDG, IATA	UN3088
· UN proper shipping name	
DOT	Self-heating solid, organic, n.o.s. (HYDRAZIDE)
· ADR	3088 SELF-HEATING SOLID, ORGANIC, N.O.
	(HYDRAZIDE), ENVIRONMENTALL
	HAZARDOUS
·IMDG	SELF-HEATING SOLID, ORGANIC, N.O.
	(HYDRAZIDE), MARINE POLLUTANT

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ΙΑΤΑ	SELF-HEATING SOLID, ORGANIC, N.O.S (HYDRAZIDE)
Transport hazard class(es)	
DOT	
	4.2 Substances liable to spontaneous combustion
Label	4.2
ADR, IMDG	
Class	4.2 Substances liable to spontaneous combustion
Label	4.2
Class Label	4.2 Substances liable to spontaneous combustion4.2
Packing group DOT, ADR, IMDG, IATA	11
Environmental hazards:	Environmentally hazardous substance, solid
Marine pollutant:	Yes Symbol (fish and tree)
Special marking (ADR):	Symbol (fish and tree)
	Warning: Substances liable to spontaneous
Special precautions for user	
Hazard identification number (Kemler code):	combustion 40
EMS Number:	combustion 40 F-A,S-J
Hazard identification number (Kemler code): EMS Number: Stowage Category	combustion 40
Hazard identification number (Kemler code): EMS Number: Stowage Category	combustion 40 F-A,S-J
Hazard identification number (Kemler code): EMS Number: Stowage Category Transport in bulk according to Annex II of	combustion 40 F-A,S-J A
Hazard identification number (Kemler code): EMS Number: Stowage Category Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Transport/Additional information: IMDG	combustion 40 F-A,S-J A

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· UN "Model Regulation":

UN 3088 SELF-HEATING SOLID, ORGANIC, N.O.S. (HYDRAZIDE), 4.2, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- EU Regulation (EC) no.1907/2006 (REACH)
- · Sara

· Section 355 (extremely hazardous substances):

None of the ingredients is listed.

• Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

• TSCA (Toxic Substances Control Act):

CAS: 25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number ACTIVE average molecular weight \leq 700)

Hazardous Air Pollutants None of the ingredients is listed.

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

• Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

• Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic categories

• EPA (Environmental Protection Agency)

None of the ingredients is listed.

• TLV (Threshold Limit Value)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS). **Hazard pictograms**



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· Signal word Danger

• **Hazard-determining components of labeling:** reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight < 700)

Hazard statements

- H251 Self-heating: may catch fire.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

Precautionary statements

P280 Wear protective clothing / face protection.

- P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact
lenses, if present and easy to do. Continue rinsing.P333+P313If skin irritation or rash occurs: Get medical advice/attention.
- P413Store bulk masses greater than 1 kg at temperatures not exceeding 5°C.P501Dispose of contents/container in accordance with local/regional/national/
 - international regulations.

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

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. LIMITATION OF LIABILITY

This document is only intended to be used as guidance as regards the risks of which we are aware that are associated with the product. Every individual who works with the product or in close proximity of it must receive suitable training. Individuals who come into contact with the product must be capable of using their own judgement as regards conditions or methods for handling, storing and using the product. Alfa Laval is not liable for demands, losses or damage of any kind that arise from flaws or deficiencies in this document or from using, handling, storing or disposing of the product unless it can be proven that Alfa Laval has acted in a grossly negligent manner. Beyond what has been agreed upon and specified in writing with Alfa Laval in the individual case, Alfa Laval makes no promises or assumes any liability, including but not limited to implicit guarantees regarding marketability or appropriateness in terms of both the information provided in this document and the product to which the information refers.

Please contact your local Alfa Laval Sales Company for futher questions.

• **Department issuing SDS:** Alfa Laval Sustainability Environment

Contact:

Argentina: alfa.consulta@alfalaval.com Australia: australia.info@alfalaval.com Austria: info.mideurope@alfalaval.com Belgium: benelux.info@alfalaval.com Bolivia: alfa.consulta@alfalaval.com Brazil: alfalaval.br@alfalaval.com Bulgaria: bulgaria.info@alfalaval.com Canada: alfacan.info@alfalaval.com Chile: chile.informacion@alfalaval.com China: china.info@alfalaval.com Clombia: info.colombia@alfalaval.com Croatia: hrvatska.info@alfalaval.com Croatia: hrvatska.info@alfalaval.com Czech Republic: czechrepublic.info@alfalaval.com Denmark: info.nordic.dk@alfalaval.com

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PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Self-heat. 1: Self-heating substances and mixtures – Category 1 Acute Tox. 4: Acute toxicity – Category 4 Skin Irrit. 2: Skin corrosion/irritation – Category 2 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A Skin Sens. 1: Skin sensitisation – Category 1 • * Data compared to the previous version altered. (Contd. of page 12)

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