


**KALEKİM**  
**Tecnica 162 B Komponenti**

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

- 1.1 Product identifier:** KALEKİM  
Tecnica 162 B Komponenti
- Other means of identification:**  
Non-applicable
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
Relevant uses: Hardener for epoxy resin based coatings  
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Details of the supplier of the safety data sheet:**  
KALEKİM Kimyevi Maddeler Sanayi ve Ticaret A.Ş.  
Reşitpaşa Cad. No: 127 34315 Avclar / İSTANBUL / TÜRKİYE  
34315 İstanbul - TÜRKİYE  
Phone: +90 212 591 30 51 - Fax: +90 212 591 94 27  
msds@kale.com.tr  
www.kalekim.com.tr
- 1.4 Emergency telephone number:** 114

**SECTION 2: HAZARDS IDENTIFICATION**

- 2.1 Classification of the substance or mixture:**  
**CLP Regulation (EC) No 1272/2008:**  
Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.  
Eye Dam. 1: Serious eye damage, Category 1, H318  
Muta. 2: Germ cell mutagenicity, Category 2, H341  
Skin Corr. 1B: Skin corrosion, Category 1B, H314  
Skin Sens. 1: Sensitisation, skin, Category 1, H317
- 2.2 Label elements:**  
**CLP Regulation (EC) No 1272/2008:**  
**Danger**
- 
- Hazard statements:**  
Muta. 2: H341 - Suspected of causing genetic defects.  
Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.  
Skin Sens. 1: H317 - May cause an allergic skin reaction.
- Precautionary statements:**  
P101: If medical advice is needed, have product container or label at hand.  
P102: Keep out of reach of children.  
P280: Wear protective gloves/face protection/protective clothing/respiratory protection/protective footwear.  
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P501: Dispose of the contents/containers in accordance with the current legislation on waste treatment
- Supplementary information:**  
Contains 2,2'-iminodiethylamine, 3-aminopropylidimethylamine, Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled, Ethylenediamine, m-phenylenebis(methylamine).
- 2.3 Other hazards:**  
Product fails to meet PBT/vPvB criteria  
Endocrine-disrupting properties: The product fails to meet the criteria.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

- 3.1 Substance:**

- CONTINUED ON NEXT PAGE -

**KALEKİM**  
**Tecnica 162 B Komponenti**

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)**








Non-applicable

**3.2 Mixture:**

**Chemical description:** Mixture of reactive amine(s)/ amide(s)

**Components:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 111-40-0 EC: 203-865-4 Index: 612-058-00-X REACH: 01-2119473793-27-XXXX	<b>2,2'-iminodiethylamine<sup>(1)</sup></b> ATP CLP00 Regulation 1272/2008 Acute Tox. 4: H302+H312; Skin Corr. 1B: H314; Skin Sens. 1: H317 - Danger 	2,5 - <10 %
CAS: 90-72-2 EC: 202-013-9 Index: 603-069-00-0 REACH: 01-2119560597-27-XXXX	<b>2,4,6-tris(dimethylaminomethyl)phenol<sup>(1)</sup></b> ATP CLP00 Regulation 1272/2008 Acute Tox. 4: H302; Eye Irrit. 2: H319; Skin Irrit. 2: H315 - Warning 	2,5 - <10 %
CAS: 8007-24-7 EC: 700-991-6 Index: Non-applicable REACH: 01-2119502450-57-XXXX	<b>Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled<sup>(1)</sup></b> Self-classified Regulation 1272/2008 Acute Tox. 4: H302+H312; Aquatic Chronic 3: H412; Eye Dam. 1: H318; Skin Irrit. 2: H315; Skin Sens. 1A: H317 - Danger 	2,5 - <10 %
CAS: 108-95-2 EC: 203-632-7 Index: 604-001-00-2 REACH: 01-2119471329-32-XXXX	<b>phenol<sup>(1)</sup></b> ATP CLP00 Regulation 1272/2008 Acute Tox. 3: H301+H311+H331; Muta. 2: H341; Skin Corr. 1B: H314; STOT RE 2: H373 - Danger 	1 - <2,5 %
CAS: 107-15-3 EC: 203-468-6 Index: 612-006-00-6 REACH: 01-2119480383-37-XXXX	<b>Ethylenediamine<sup>(1)</sup></b> ATP CLP00 Regulation 1272/2008 Acute Tox. 4: H302+H312; Flam. Liq. 3: H226; Resp. Sens. 1: H334; Skin Corr. 1B: H314; Skin Sens. 1: H317 - Danger 	<1 %
CAS: 1477-55-0 EC: 216-032-5 Index: Non-applicable REACH: 01-2119480150-50-XXXX	<b>m-phenylenebis(methylamine)<sup>(1)</sup></b> Self-classified Regulation 1272/2008 Acute Tox. 4: H302+H332; Aquatic Chronic 3: H412; Eye Dam. 1: H318; Skin Corr. 1B: H314; Skin Sens. 1B: H317; EUH071 - Danger 	<1 %
CAS: 109-55-7 EC: 203-680-9 Index: Non-applicable REACH: 01-2119486842-27-XXXX	<b>3-aminopropyldimethylamine<sup>(1)</sup></b> ATP CLP00 Regulation 1272/2008 Acute Tox. 4: H302; Flam. Liq. 3: H226; Skin Corr. 1B: H314; Skin Sens. 1: H317 - Danger 	<1 %

<sup>(1)</sup> Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

**Other information:**

Identification	Specific concentration limit
phenol CAS: 108-95-2 EC: 203-632-7	% (w/w) >=3: Skin Corr. 1B - H314 1<= % (w/w) <3: Skin Irrit. 2 - H315 % (w/w) >=1: Eye Irrit. 2 - H319

**SECTION 4: FIRST AID MEASURES**

**4.1 Description of first aid measures:**

Request medical assistance immediately, showing the SDS of this product.

**By inhalation:**

This product is not classified as hazardous through inhalation. However, in case of intoxication symptoms it is recommended to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

**By skin contact:**

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

**By eye contact:**

- CONTINUED ON NEXT PAGE -

**KALEKİM**  
**Tecnica 162 B Komponenti**

**SECTION 4: FIRST AID MEASURES (continued)**

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

**By ingestion/aspiration:**

Request immediate medical assistance, showing the SDS of this product. Do not induce vomiting, because its expulsion from the stomach can be hazardous to the mucus of the main digestive tract, and also risk damage to the respiratory system through inhalation. Rinse out the mouth and throat, as they may have been affected during ingestion. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. Keep the person affected at rest.

**4.2 Most important symptoms and effects, both acute and delayed:**

Acute and delayed effects are indicated in sections 2 and 11.

**4.3 Indication of any immediate medical attention and special treatment needed:**

Non-applicable

**SECTION 5: FIREFIGHTING MEASURES**

**5.1 Extinguishing media:**

**Suitable extinguishing media:**

Product is non-flammable under normal conditions of storage, manipulation and use, but the product contains flammable substances. In the case of inflammation as a result of improper manipulation, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

**Unsuitable extinguishing media:**

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

**5.2 Special hazards arising from the substance or mixture:**

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

**5.3 Advice for firefighters:**

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

**Additional provisions:**

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures:**

**For non-emergency personnel:**

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

**For emergency responders:**

Wear protective equipment. Keep unprotected persons away. See section 8.

**6.2 Environmental precautions:**

This product is not classified as hazardous to the environment. Keep product away from drains, surface and underground water.

**6.3 Methods and material for containment and cleaning up:**

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

- CONTINUED ON NEXT PAGE -

**KALEKİM**  
**Tecnica 162 B Komponenti**

**SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)**

**6.4 Reference to other sections:**

See sections 8 and 13.

**SECTION 7: HANDLING AND STORAGE**

**7.1 Precautions for safe handling:**

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks with regards manually handling weights. Maintain order, cleanliness and dispose of using safe methods (section 6).

B.- Technical recommendations for the prevention of fires and explosions

Avoid the evaporation of the product as it contains flammable substances, which could form flammable vapour/air mixtures in the presence of sources of ignition. Control sources of ignition (mobile phones, sparks,...) and transfer at slow speeds to avoid the creation of electrostatic charges. Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

**7.2 Conditions for safe storage, including any incompatibilities:**

A.- Technical measures for storage

Minimum Temp.: 5 °C

Maximum Temp.: 35 °C

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

**7.3 Specific end use(s):**

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters:**

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

Directive (EU) 2000/39, Directive 2004/37/EC, Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

Identification	Occupational exposure limits		
	IOELV (8h)	2 ppm	8 mg/m <sup>3</sup>
phenol CAS: 108-95-2 EC: 203-632-7	IOELV (STEL)	4 ppm	16 mg/m <sup>3</sup>

**DNEL (Workers):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
2,2'-iminodiethylamine CAS: 111-40-0 EC: 203-865-4	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	11,4 mg/kg	Non-applicable
	Inhalation	92,1 mg/m <sup>3</sup>	2,6 mg/m <sup>3</sup>	15,4 mg/m <sup>3</sup>	0,87 mg/m <sup>3</sup>
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,15 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0,53 mg/m <sup>3</sup>	Non-applicable
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled CAS: 8007-24-7 EC: 700-991-6	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	2,1 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	7,4 mg/m <sup>3</sup>	Non-applicable

- CONTINUED ON NEXT PAGE -

**KALEKİM**  
**Tecnica 162 B Komponenti**

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
phenol CAS: 108-95-2 EC: 203-632-7	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	1,23 mg/kg	Non-applicable
	Inhalation	Non-applicable	16 mg/m <sup>3</sup>	8 mg/m <sup>3</sup>	Non-applicable
Ethylenediamine CAS: 107-15-3 EC: 203-468-6	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	3,6 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	25 mg/m <sup>3</sup>	Non-applicable
m-phenylenebis(methylamine) CAS: 1477-55-0 EC: 216-032-5	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,33 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	1,2 mg/m <sup>3</sup>	0,2 mg/m <sup>3</sup>
3-aminopropylidimethylamine CAS: 109-55-7 EC: 203-680-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	Non-applicable	1,2 mg/m <sup>3</sup>	Non-applicable

**DNEL (General population):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
2,2'-iminodiethylamine CAS: 111-40-0 EC: 203-865-4	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	4,88 mg/kg	Non-applicable	4,88 mg/kg	Non-applicable
	Inhalation	27,5 mg/m <sup>3</sup>	Non-applicable	4,6 mg/m <sup>3</sup>	Non-applicable
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	Oral	Non-applicable	Non-applicable	0,075 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,075 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0,13 mg/m <sup>3</sup>	Non-applicable
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled CAS: 8007-24-7 EC: 700-991-6	Oral	Non-applicable	Non-applicable	0,75 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,75 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	1,31 mg/m <sup>3</sup>	Non-applicable
phenol CAS: 108-95-2 EC: 203-632-7	Oral	Non-applicable	Non-applicable	0,4 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,4 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	1,32 mg/m <sup>3</sup>	Non-applicable
Ethylenediamine CAS: 107-15-3 EC: 203-468-6	Oral	Non-applicable	Non-applicable	0,275 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	Non-applicable	12,5 mg/m <sup>3</sup>	Non-applicable

**PNEC:**

Identification				
2,2'-iminodiethylamine CAS: 111-40-0 EC: 203-865-4	STP	6 mg/L	Fresh water	0,56 mg/L
	Soil	7,97 mg/kg	Marine water	0,056 mg/L
	Intermittent	0,32 mg/L	Sediment (Fresh water)	1072 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	107,2 mg/kg
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	STP	0,2 mg/L	Fresh water	0,046 mg/L
	Soil	0,025 mg/kg	Marine water	0,005 mg/L
	Intermittent	0,46 mg/L	Sediment (Fresh water)	0,262 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,026 mg/kg
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled CAS: 8007-24-7 EC: 700-991-6	STP	100 mg/L	Fresh water	0,0114 mg/L
	Soil	171,41 mg/kg	Marine water	0,00114 mg/L
	Intermittent	Non-applicable	Sediment (Fresh water)	5 mg/kg
	Oral	0,0333 g/kg	Sediment (Marine water)	0,5 mg/kg
phenol CAS: 108-95-2 EC: 203-632-7	STP	2,1 mg/L	Fresh water	0,008 mg/L
	Soil	0,136 mg/kg	Marine water	0,001 mg/L
	Intermittent	0,031 mg/L	Sediment (Fresh water)	0,091 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,009 mg/kg

- CONTINUED ON NEXT PAGE -

**KALEKİM**  
**Tecnica 162 B Komponenti**

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**



Identification				
Ethylenediamine CAS: 107-15-3 EC: 203-468-6	STP	0,5 mg/L	Fresh water	0,016 mg/L
	Soil	4,36 mg/kg	Marine water	0,002 mg/L
	Intermittent	0,167 mg/L	Sediment (Fresh water)	7,68 mg/kg
	Oral	0,0049 g/kg	Sediment (Marine water)	0,768 mg/kg
m-phenylenebis(methylamine) CAS: 1477-55-0 EC: 216-032-5	STP	10 mg/L	Fresh water	0,094 mg/L
	Soil	2,44 mg/kg	Marine water	0,009 mg/L
	Intermittent	0,152 mg/L	Sediment (Fresh water)	12,4 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	1,24 mg/kg
3-aminopropylidimethylamine CAS: 109-55-7 EC: 203-680-9	STP	10 mg/L	Fresh water	0,073 mg/L
	Soil	0,104 mg/kg	Marine water	0,007 mg/L
	Intermittent	0,34 mg/L	Sediment (Fresh water)	0,735 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,073 mg/kg

**8.2 Exposure controls:**



**A.- Individual protection measures, such as personal protective equipment**

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

**B.- Respiratory protection**



Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours	 CAT III	EN 405:2002+A1:2010	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

**C.- Specific protection for the hands**



Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Chemical protective gloves (Material: Chloroprene, Breakthrough time: > 480 min, Thickness: 0.65 mm)	 CAT III	EN ISO 21420:2020	Replace the gloves at any sign of deterioration.

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

**D.- Eye and face protection**

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Face shield	 CAT II	EN 166:2002 EN 167:2002 EN 168:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.



**E.- Body protection**

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks	 CAT III	EN 13034:2005+A1:2009 EN 168:2002 EN ISO 13982-1:2004/A1:2010 EN ISO 6529:2013 EN ISO 6530:2005 EN 464:1994	For professional use only. Clean periodically according to the manufacturer's instructions.



- CONTINUED ON NEXT PAGE -

**KALEKİM**  
**Tecnica 162 B Komponenti**

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory foot protection	Safety footwear for protection against chemical risk		EN ISO 20345:2011 EN 13832-1:2019	Replace boots at any sign of deterioration.

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

**Environmental exposure controls:**

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

**Volatile organic compounds:**

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	9,42 % weight
V.O.C. density at 20 °C:	101,13 kg/m <sup>3</sup> (101,13 g/L)
Average carbon number:	4,1
Average molecular weight:	98,47 g/mol

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties:**

For complete information see the product datasheet.

**Appearance:**

Physical state at 20 °C:	Liquid
Appearance:	Not available
Colour:	Not available
Odour:	Not available
Odour threshold:	Non-applicable *

**Volatility:**

Boiling point at atmospheric pressure:	192 °C
Vapour pressure at 20 °C:	177 Pa
Vapour pressure at 50 °C:	1058,04 Pa (1,06 kPa)
Evaporation rate at 20 °C:	Non-applicable *

**Product description:**

Density at 20 °C:	1073,4 kg/m <sup>3</sup>
Relative density at 20 °C:	1,073
Dynamic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 40 °C:	Non-applicable *
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 °C:	Non-applicable *
Partition coefficient n-octanol/water 20 °C:	Non-applicable *

\*Not relevant due to the nature of the product, not providing information property of its hazards.

- CONTINUED ON NEXT PAGE -

**KALEKİM**  
**Tecnica 162 B Komponenti**

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)**

Solubility in water at 20 °C:	Non-applicable *
Solubility properties:	Non-applicable *
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
<b>Flammability:</b>	
Flash Point:	Non Flammable (>60 °C)
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	358 °C
Lower flammability limit:	Non-applicable *
Upper flammability limit:	Non-applicable *
<b>Particle characteristics:</b>	
Median equivalent diameter:	Non-applicable

**9.2 Other information:**

**Information with regard to physical hazard classes:**

Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *
Corrosive to metals:	Non-applicable *
Heat of combustion:	Non-applicable *
Aerosols-total percentage (by mass) of flammable components:	Non-applicable *

**Other safety characteristics:**

Surface tension at 20 °C:	Non-applicable *
Refraction index:	Non-applicable *

\*Not relevant due to the nature of the product, not providing information property of its hazards.

**SECTION 10: STABILITY AND REACTIVITY**

**10.1 Reactivity:**

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

**10.2 Chemical stability:**

Chemically stable under the indicated conditions of storage, handling and use.

**10.3 Possibility of hazardous reactions:**

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

**10.4 Conditions to avoid:**

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Precaution	Precaution	Not applicable

**10.5 Incompatible materials:**

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Precaution	Not applicable	Avoid alkalis or strong bases

**10.6 Hazardous decomposition products:**

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:**

- CONTINUED ON NEXT PAGE -

**KALEKİM**  
**Tecnica 162 B Komponenti**

**SECTION 11: TOXICOLOGICAL INFORMATION (continued)**

The experimental information related to the toxicological properties of the product itself is not available

**Dangerous health implications:**

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: Corrosive product, if it is swallowed causes burns destroying the tissues. For more information about secondary effects from skin contact see section 2.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Prolonged inhalation of the product is corrosive to mucous membranes and the upper respiratory tract

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Above all, skin contact may occur as fabrics of all thicknesses can be destroyed, resulting in burns. For more information on the secondary effects see section 2.
- Contact with the eyes: Produces serious eye damage after contact.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.  
IARC: phenol (3)
- Mutagenicity: Exposure to this product can cause genetic modifications. For more specific information on the possible health effects see section 2.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous with sensitising effects. For more information see section 3.
- Skin: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

F- Specific target organ toxicity (STOT) - single exposure:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met. However, it does contain substances which are classified as dangerous due to repetitive exposure. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

**Other information:**

Non-applicable

**Specific toxicology information on the substances:**

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
2,2'-iminodiethylamine CAS: 111-40-0 EC: 203-865-4	500 mg/kg (ATEi)	1100 mg/kg (ATEi)	
	LC50 inhalation	Non-applicable	
phenol CAS: 108-95-2 EC: 203-632-7	100 mg/kg	630 mg/kg	Rat
	LD50 dermal	3 mg/L (ATEi)	Rabbit
	LC50 inhalation		

- CONTINUED ON NEXT PAGE -

**KALEKİM**  
**Tecnica 162 B Komponenti**

**SECTION 11: TOXICOLOGICAL INFORMATION (continued)**

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled CAS: 8007-24-7 EC: 700-991-6	500 mg/kg	1100 mg/kg (ATEi)	Rat
	Non-applicable		
	Non-applicable		
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	1200 mg/kg	Non-applicable	Rat
	Non-applicable		
	Non-applicable		
m-phenylenebis(methylamine) CAS: 1477-55-0 EC: 216-032-5	1090 mg/kg	Non-applicable	Rat
	Non-applicable		
	Non-applicable		
3-aminopropyldimethylamine CAS: 109-55-7 EC: 203-680-9	1870 mg/kg	Non-applicable	Rat
	Non-applicable		
	Non-applicable		

**11.2 Information on other hazards:**

**Endocrine disrupting properties**

Endocrine-disrupting properties: The product fails to meet the criteria.

**Other information**

Non-applicable

**SECTION 12: ECOLOGICAL INFORMATION**

The experimental information related to the eco-toxicological properties of the product itself is not available

**12.1 Toxicity:**

**Acute toxicity:**

Identification	Concentration		Species	Genus
	LC50	EC50		
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	345 mg/L (96 h)	Non-applicable	QSAR	Fish
	Non-applicable			
	Non-applicable			
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled CAS: 8007-24-7 EC: 700-991-6	>10 - 100 mg/L (96 h)			Fish
	>10 - 100 mg/L (48 h)			Crustacean
	>10 - 100 mg/L (72 h)			Algae
phenol CAS: 108-95-2 EC: 203-632-7	14 mg/L (96 h)		Leuciscus idus	Fish
	12 mg/L (24 h)		Daphnia magna	Crustacean
	370 mg/L (96 h)		Chlorella vulgaris	Algae
m-phenylenebis(methylamine) CAS: 1477-55-0 EC: 216-032-5	88 mg/L (96 h)		Oryzias latipes	Fish
	15 mg/L (48 h)		Daphnia magna	Crustacean
	20 mg/L (72 h)		Selenastrum capricornutum	Algae
3-aminopropyldimethylamine CAS: 109-55-7 EC: 203-680-9	122 mg/L (96 h)		Leuciscus idus	Fish
	68,3 mg/L (24 h)		Daphnia magna	Crustacean
	56,2 mg/L (72 h)		Scenedesmus subspicatus	Algae

**Chronic toxicity:**

Identification	Concentration		Species	Genus
	NOEC	NOEC		
phenol CAS: 108-95-2 EC: 203-632-7	0,077 mg/L		Cirrhina mrigala	Fish
	0,16 mg/L		Daphnia magna	Crustacean
m-phenylenebis(methylamine) CAS: 1477-55-0 EC: 216-032-5	Non-applicable			
	4,7 mg/L		Daphnia magna	Crustacean
3-aminopropyldimethylamine CAS: 109-55-7 EC: 203-680-9	Non-applicable			
	3,64 mg/L		Daphnia magna	Crustacean

**12.2 Persistence and degradability:**

**Substance-specific information:**

- CONTINUED ON NEXT PAGE -

**KALEKİM**  
**Tecnica 162 B Komponenti**

**SECTION 12: ECOLOGICAL INFORMATION (continued)**

Identification	Degradability		Biodegradability	
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled CAS: 8007-24-7 EC: 700-991-6	BOD5	Non-applicable	Concentration	19.2 mg/L
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	96 %
phenol CAS: 108-95-2 EC: 203-632-7	BOD5	1,68 g O <sub>2</sub> /g	Concentration	100 mg/L
	COD	2,33 g O <sub>2</sub> /g	Period	14 days
	BOD5/COD	0,72	% Biodegradable	85 %
m-phenylenebis(methylamine) CAS: 1477-55-0 EC: 216-032-5	BOD5	Non-applicable	Concentration	14 mg/L
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	49 %

**12.3 Bioaccumulative potential:**

**Substance-specific information:**

Identification	Bioaccumulation potential	
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	BCF	3
	Pow Log	0.77
	Potential	Low
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled CAS: 8007-24-7 EC: 700-991-6	BCF	882
	Pow Log	6.2
	Potential	High
phenol CAS: 108-95-2 EC: 203-632-7	BCF	17
	Pow Log	1.48
	Potential	Low
m-phenylenebis(methylamine) CAS: 1477-55-0 EC: 216-032-5	BCF	3
	Pow Log	0.18
	Potential	Low

**12.4 Mobility in soil:**

Identification	Absorption/desorption		Volatility	
2,2'-iminodiethylamine CAS: 111-40-0 EC: 203-865-4	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	4,164E-2 N/m (25 °C)	Moist soil	Non-applicable
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	Koc	15130	Henry	9,312E-12 Pa·m <sup>3</sup> /mol
	Conclusion	Immobile	Dry soil	No
	Surface tension	Non-applicable	Moist soil	No
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled CAS: 8007-24-7 EC: 700-991-6	Koc	122.51	Henry	0E+0 Pa·m <sup>3</sup> /mol
	Conclusion	Moderate	Dry soil	Non-applicable
	Surface tension	Non-applicable	Moist soil	Non-applicable
phenol CAS: 108-95-2 EC: 203-632-7	Koc	50	Henry	2,2E-2 Pa·m <sup>3</sup> /mol
	Conclusion	Very High	Dry soil	Yes
	Surface tension	1,847E-2 N/m (231,01 °C)	Moist soil	Yes
Ethylenediamine CAS: 107-15-3 EC: 203-468-6	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	4,188E-2 N/m (25 °C)	Moist soil	Non-applicable
m-phenylenebis(methylamine) CAS: 1477-55-0 EC: 216-032-5	Koc	1300	Henry	Non-applicable
	Conclusion	Low	Dry soil	Non-applicable
	Surface tension	Non-applicable	Moist soil	Non-applicable

**12.5 Results of PBT and vPvB assessment:**

Product fails to meet PBT/vPvB criteria

**12.6 Endocrine disrupting properties:**

Endocrine-disrupting properties: The product fails to meet the criteria.

**12.7 Other adverse effects:**

- CONTINUED ON NEXT PAGE -

**KALEKİM**  
**Tecnica 162 B Komponenti**

**SECTION 12: ECOLOGICAL INFORMATION (continued)**

Not described

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods:**

Code	Description	Waste class (Regulation (EU) No 1357/2014)
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances	Dangerous

**Type of waste (Regulation (EU) No 1357/2014):**

HP11 Mutagenic, HP8 Corrosive

**Waste management (disposal and evaluation):**

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

**Regulations related to waste management:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

**SECTION 14: TRANSPORT INFORMATION \*\***

**Transport of dangerous goods by land:**

With regard to ADR 2021 and RID 2021:



- 14.1 UN number or ID number:** UN1760
- 14.2 UN proper shipping name:** CORROSIVE LIQUID, N.O.S. (2,2'-iminodiethylamine)
- 14.3 Transport hazard class(es):** 8  
Labels: 8
- 14.4 Packing group:** I
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**  
Special regulations: 274  
Tunnel restriction code: E  
Physico-Chemical properties: see section 9  
Limited quantities: 0
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

**Transport of dangerous goods by sea:**

With regard to IMDG 40-20:

\*\* Changes with regards to the previous version

**KALEKİM**  
**Tecnica 162 B Komponenti**

SECTION 14: TRANSPORT INFORMATION \*\* (continued)



- 14.1 UN number or ID number:** UN1760  
**14.2 UN proper shipping name:** CORROSIVE LIQUID, N.O.S. (2,2'-iminodiethylamine)  
**14.3 Transport hazard class(es):** 8  
 Labels: 8  
**14.4 Packing group:** I  
**14.5 Marine pollutant:** No  
**14.6 Special precautions for user**  
 Special regulations: 274  
 EmS Codes: F-A, S-B  
 Physico-Chemical properties: see section 9  
 Limited quantities: 0  
 Segregation group: Non-applicable  
**14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

**Transport of dangerous goods by air:**

With regard to IATA/ICAO 2022:



- 14.1 UN number or ID number:** UN1760  
**14.2 UN proper shipping name:** CORROSIVE LIQUID, N.O.S. (2,2'-iminodiethylamine)  
**14.3 Transport hazard class(es):** 8  
 Labels: 8  
**14.4 Packing group:** I  
**14.5 Environmental hazards:** No  
**14.6 Special precautions for user**  
 Physico-Chemical properties: see section 9  
**14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

\*\* Changes with regards to the previous version

SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Ethylenediamine  
 Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable  
 Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable  
 Article 95, REGULATION (EU) No 528/2012: Non-applicable  
 REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

**Seveso III:**

Non-applicable

**Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ....):**

Shall not be used in:  
 —ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,  
 —tricks and jokes,  
 —games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

**Specific provisions in terms of protecting people or the environment:**

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

**Other legislation:**

The product could be affected by sectorial legislation

- CONTINUED ON NEXT PAGE -

**KALEKİM**  
**Tecnica 162 B Komponenti**

**SECTION 15: REGULATORY INFORMATION (continued)**

**15.2 Chemical safety assessment:**

The supplier has not carried out evaluation of chemical safety.

**SECTION 16: OTHER INFORMATION**

**Legislation related to safety data sheets:**

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878).

**Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:**

COMMISSION REGULATION (EU) 2020/878

TRANSPORT INFORMATION (SECTION 14):

- Packing group

**Texts of the legislative phrases mentioned in section 2:**

H314: Causes severe skin burns and eye damage.

H318: Causes serious eye damage.

H317: May cause an allergic skin reaction.

H341: Suspected of causing genetic defects.

**Texts of the legislative phrases mentioned in section 3:**

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

**CLP Regulation (EC) No 1272/2008:**

Acute Tox. 3: H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled.

Acute Tox. 4: H302 - Harmful if swallowed.

Acute Tox. 4: H302+H312 - Harmful if swallowed or in contact with skin.

Acute Tox. 4: H302+H332 - Harmful if swallowed or if inhaled.

Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.

Eye Dam. 1: H318 - Causes serious eye damage.

Eye Irrit. 2: H319 - Causes serious eye irritation.

Flam. Liq. 3: H226 - Flammable liquid and vapour.

Muta. 2: H341 - Suspected of causing genetic defects.

Resp. Sens. 1: H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.

Skin Irrit. 2: H315 - Causes skin irritation.

Skin Sens. 1: H317 - May cause an allergic skin reaction.

Skin Sens. 1A: H317 - May cause an allergic skin reaction.

Skin Sens. 1B: H317 - May cause an allergic skin reaction.

STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure.

**Advice related to training:**

Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

**Principal bibliographical sources:**

<http://echa.europa.eu>

<http://eur-lex.europa.eu>

**Abbreviations and acronyms:**

ADR: European agreement concerning the international carriage of dangerous goods by road

IMDG: International maritime dangerous goods code

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

COD: Chemical Oxygen Demand

BOD5: 5day biochemical oxygen demand

BCF: Bioconcentration factor

LD50: Lethal Dose 50

LC50: Lethal Concentration 50

EC50: Effective concentration 50

LogPOW: Octanolwater partition coefficient

Koc: Partition coefficient of organic carbon

UFI: unique formula identifier

IARC: International Agency for Research on Cancer

**Other information:**

- CONTINUED ON NEXT PAGE -



## Safety data sheet

This SDS is an English translation of COMMISSION REGULATION (EU) 2020/878, without any country-specific legislation

### **KALEKİM** **Tecnica 162 B Komponenti**

#### SECTION 16: OTHER INFORMATION (continued)

Duygu Çelik;  
TSE Certificate Nr. GBF-A-03358 (Issue Date: 06.12.2021, Valid Thru: 06.12.2024)

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -