

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Mixture
Trade name : KUMHO 1502H

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Use of the substance/mixture : Manufacture of tyres and general rubber articles, including processing of raw (uncured) rubber, handling and mixing of rubber additives, vulcanising, cooling and finishing

1.2.2. Uses advised against

Restrictions on use : Not available

1.3. Details of the supplier of the safety data sheet**Manufacturer**

Kumho Petrochemical Co.Ltd
64, Sanggae-ro, Nam-gu, Ulsan, 44786, Republic of Korea
T +82-52-259-6051~7, F +82-52-259-6053

Supplier

TsafeE GmbH
Landwehrplatz 6, 66111 Saarbruecken, Germany
T +49 177 9166175
tsg@tsafeg.com

1.4. Emergency telephone number

Country/Area	Organisation/Company	Address	Emergency number	Comment
Germany	Giftinformationszentrum-Nord der Länder Bremen, Hamburg, Niedersachsen und Schleswig-Holstein (GIZ-Nord) Universitätsmedizin Göttingen - Georg-August-Universität	Robert-Koch Straße 40 37075 Göttingen	+49 (0) 551 19240	

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

EUH-statements : EUH210 - Safety data sheet available on request.

2.3. Other hazards

Mixture does not contain substance (s) classified as PBT or vPvB in concentrations above 0,1%.

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
STYRENE/BUTADIENE COPOLYMER	CAS-No.: 9003-55-8	94 – 96	Not classified
Fatty acids, C14-18 and C16-18-unsatd.	CAS-No.: 67701-06-8 EC-No.: 266-930-6	1 – 5	Not classified
Resin acids and Rosin acids, potassium salts	CAS-No.: 61790-50-9 EC-No.: 263-142-4	1 – 5	Eye Irrit. 2, H319

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Move the affected person away from the contaminated area and into the fresh air. If breathing stops, give artificial respiration. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. Wash contaminated clothing before reuse. Get medical advice/attention if you feel unwell.
First-aid measures after eye contact	: Rinse eyes with water as a precaution. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention if you feel unwell.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell. Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth out with water. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a water jet since it may cause the fire to spread.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Vapours may cause fire/explosion if source of ignition is present. Dust may form flammable and explosive mixture with air. Pressurised container: May burst if heated. Thermal decomposition can lead to the release of irritating gases and vapours.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions	: Avoid breathing dust/fume/gas/mist/vapors/spray. Keep upwind. Use unmanned hose holders or monitor nozzles from maximum distance to prevent fire from spreading to cargo.
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Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Cool containers with flooding quantities of water until well after fire is out.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Wear personal protective clothing (see chapter 8). Do not touch spilled material. Avoid generation and spreading of dust. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use of suppression techniques are required. Stop leak if safe to do so.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Avoid discharge to the environment. Do not discharge into drains. In case of large spillages: Contact the emergency services.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product. This material and its container must be disposed of in a safe way, and as per local legislation. Not Low. Keep upwind. Keep in suitable, closed containers for disposal. Sweep or shovel spills into appropriate container for disposal. Collect spillage. Use suitable disposal containers.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid dust production. Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe vapours. For further information refer to section 8: "Exposure controls/personal protection".

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Incompatible products : Strong oxidizing agents.

Germany

Storage class (LGK, TRGS 510) : LGK 13 - Non-combustible solids

Joint storage table :

LGK 1	LGK 2A	LGK 2B	LGK 3	LGK 4.1A
LGK 4.1B	LGK 4.2	LGK 4.3	LGK 5.1A	LGK 5.1B
LGK 5.1C	LGK 5.2	LGK 6.1A	LGK 6.1B	LGK 6.1C
LGK 6.1D	LGK 6.2	LGK 7	LGK 8A	LGK 8B
LGK 10	LGK 11	LGK 12	LGK 13	LGK 10-13

Joint storage not permitted for : LGK 1, LGK 6.2, LGK 7

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Joint storage with restrictions permitted for : LGK 4.1A, LGK 5.1C
Joint storage permitted for : LGK 2A, LGK 2B, LGK 3, LGK 4.1B, LGK 4.2, LGK 4.3, LGK 5.1A, LGK 5.1B, LGK 5.2, LGK 6.1A, LGK 6.1B, LGK 6.1C, LGK 6.1D, LGK 8A, LGK 8B, LGK 10, LGK 11, LGK 12, LGK 13, LGK 10-13

Switzerland

Storage class (LK) : NG - Non-hazardous

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

8.2.2. Personal protection equipment

Personal protective equipment:

Corrosionproof clothing. Dust formation: dust mask. Insulated gloves. Safety glasses.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses. Splash goggles. face shield

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing. Use insulated gloves when handling this material hot. Use protective apron

Hand protection:

Heat resistant gloves. Protective gloves

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Other skin protection

Materials for protective clothing:

Use protective apron

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Wear respiratory protection when its use is identified for certain contributing scenarios.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: yellowish.
Odour	: mild.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not available
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: ≈ 246 (<) °C
Auto-ignition temperature	: > 388 °C
Decomposition temperature	: Not available
pH	: Not available
pH solution	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 0.92 – 0.96
Relative density	: Not available
Relative vapour density at 20°C	: Not applicable
Particle size	: Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

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10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂). Toxic vapours are released. Toxic gases are released. Hydrocarbons.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not available
Acute toxicity (dermal) : Not available
Acute toxicity (inhalation) : Not available

Fatty acids, C14-18 and C16-18-unsatd. (67701-06-8)

LD50 oral rat	> 2000 mg/kg bodyweight Source: ECHA, sex: male/female
LD50 dermal rabbit	> 2000 mg/kg bodyweight Source: ECHA
LC50 Inhalation - Rat	> 0.162 mg/l air Source: ECHA

Resin acids and Rosin acids, potassium salts (61790-50-9)

LD50 oral rat	> 2000 mg/kg bodyweight Source: ECHA
LD50 dermal rat	> 2000 mg/kg bodyweight Source: ECHA

Skin corrosion/irritation : Not available
Serious eye damage/irritation : Not available
Respiratory or skin sensitisation : Not available
Germ cell mutagenicity : Not available
Carcinogenicity : Not available
Reproductive toxicity : Not available
STOT-single exposure : Not available
STOT-repeated exposure : Not available

Fatty acids, C14-18 and C16-18-unsatd. (67701-06-8)

NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight/day Source: ECHA
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Aspiration hazard : Not available

11.2. Information on other hazards

No additional information available

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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute) : Not available

Hazardous to the aquatic environment, long-term (chronic) : Not available

Fatty acids, C14-18 and C16-18-unsatd. (67701-06-8)

LC50 - Fish [1]	> 1000 mg/l Source: ECHA
EC50 - Crustacea [1]	> 4.8 mg/l Source: ECHA
EC50 72h - Algae [1]	> 0.9 mg/l Source: ECHA
NOEC chronic crustacea	> 0.22 mg/l Source: ECHA

Resin acids and Rosin acids, potassium salts (61790-50-9)

LC50 - Fish [1]	> 1.7 mg/l Source: ECHA
EC50 72h - Algae [1]	16.6 mg/l Source: ECHA

12.2. Persistence and degradability

Fatty acids, C14-18 and C16-18-unsatd. (67701-06-8)

Persistence and degradability	Not rapidly degradable
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STYRENE/BUTADIENE COPOLYMER (9003-55-8)

Persistence and degradability	Not rapidly degradable
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Resin acids and Rosin acids, potassium salts (61790-50-9)

Persistence and degradability	Not rapidly degradable
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12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

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Mixture does not contain substance (s) classified as PBT or vPvB in concentrations above 0,1%.

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : Not available.

12.7. Other adverse effects

Other adverse effects : Not available.

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated for transport				
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

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REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG).
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).
Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1).
Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

ABM category : A(4) - low hazard for aquatic organisms, may have longterm hazardous effects in aquatic environment
SZW list of carcinogens : Fatty acids, C14-18 and C16-18-unsatd., Resin acids and Rosin acids, potassium salts are listed
SZW list of mutagens : Fatty acids, C14-18 and C16-18-unsatd. is listed
SZW list of reprotoxic substances – Breastfeeding : None of the components are listed
SZW list of reprotoxic substances – Fertility : None of the components are listed
SZW list of reprotoxic substances – Development : None of the components are listed

Denmark

Classification remarks : Emergency management guidelines for the storage of flammable liquids must be followed

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

NOAEL	No-Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
N.O.S.	Not Otherwise Specified
LOAEL	Lowest Observed Adverse Effect Level
LD50	Median lethal dose

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Abbreviations and acronyms:	
LC50	Median lethal concentration
IOELV	Indicative Occupational Exposure Limit Value
IMDG	International Maritime Dangerous Goods
IATA	International Air Transport Association
IARC	International Agency for Research on Cancer
EN	European Standard
ED	Endocrine disruptor
EC50	Median effective concentration
EC-No.	European Community number
DNEL	Derived-No Effect Level
DMEL	Derived Minimal Effect level
COD	Chemical oxygen demand (COD)
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
BOD	Biochemical oxygen demand (BOD)
BLV	Biological limit value
BCF	Bioconcentration factor
ATE	Acute Toxicity Estimate
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CAS-No.	Chemical Abstract Service number
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
TLM	Median Tolerance Limit
TRGS	Technical Rules for Hazardous Substances
ThOD	Theoretical oxygen demand (ThOD)
VOC	Volatile Organic Compounds
WGK	Water Hazard Class
vPvB	Very Persistent and Very Bioaccumulative

The classification complies with : ATP 12

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.