

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

Product form : Mixture
Product name : KUMHO KNB 35M
UFI : TD40-Y0YR-300U-JP90
REACH registration No : Monomer is registered instead of Butadiene-Acrylonitrile polymer. (Registration number of monomer: Acrylonitrile: 01-2119474195-34-****, Butadiene: 01-2119471988-16-****)

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

Main use category : Industrial use
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

No additional information 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
Landwehrpl 6, 66111, Saarbruecken, Germany
T +49 177 9166175
shkim@tsafeg.com

1.4. Emergency telephone number

| Country | 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 | (English only) |

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%.

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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] |
|---------------------------------------|--|---------|---|
| BUTADIENE/ACRYLONITRILE COPOLYMER | (CAS-No.) 9003-18-3 | 96 – 98 | Not classified |
| Fatty acids, C14-18 and C16-18-unsatd | (CAS-No.) 67701-06-8 (EC-No.) 266-930-6 | 1 – 2 | Not classified |
| Rosin, potassium salts | (CAS-No.) 61790-50-9 (EC-No.) 263-142-4 | 1 – 2 | Eye Irrit. 2, H319 |

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|--|
| First-aid measures general | : Get medical attention. |
| First-aid measures after inhalation | : Move the affected person away from the contaminated area and into the fresh air. Keep victim warm and quiet. If breathing is difficult, trained personnel should give oxygen. Get medical advice/attention if you feel unwell. |
| First-aid measures after skin contact | : After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Wash contaminated clothing before reuse. Get medical advice/attention if you feel unwell. |
| First-aid measures after eye contact | : Avoid direct eye contact with product, also via contamination on hands. Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). Remove contact lenses, if present and easy to do. Continue rinsing. |
| First-aid measures after ingestion | : Call a poison center or a doctor if you feel unwell. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. |

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

| | |
|------------------------------------|-----------------------------|
| Symptoms/effects after eye contact | : May cause eye irritation. |
|------------------------------------|-----------------------------|

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. Foam. Carbon dioxide (CO ₂). |
| 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 | : Thermal decomposition can lead to the release of irritating gases and vapours. Contains gas under pressure; may explode if heated. May ignite : dust. Gas. |
| Hazardous decomposition products in case of fire | : Toxic fumes may be released. Carbon oxides (CO, CO ₂). |

5.3. Advice for firefighters

| | |
|---------------------------|--|
| Firefighting instructions | : Use personal protective equipment as required. |
|---------------------------|--|

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| | |
|--------------------------------|---|
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. Keep upwind. Fight fire from safe distance and protected location. Withdraw immediately in case of rising sound from venting devices or discolouration from tank. Do not breathe fumes. Avoid inhalation of the product. Move containers away from the fire area if this can be done without risk. |
|--------------------------------|---|

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

| | |
|----------------------|---|
| Protective equipment | : Wear recommended personal protective equipment. |
| Emergency procedures | : No flames, no sparks. Eliminate all sources of ignition. Keep upwind. Stop leak if safe to do so. Move containers away from the fire area if this can be done without risk. |

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". |
| Emergency procedures | : Stop leak if safe to do so. Do not touch spilled material. |

6.2. Environmental precautions

Avoid release to the environment. Release. Contact the emergency services.

6.3. Methods and material for containment and cleaning up

| | |
|-------------------------|--|
| Methods for cleaning up | : Small spillages: Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal. Significant spillages: High. Position. Stay upwind/keep distance from source. Shovel or sweep up and put in a closed container for disposal. Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. |
|-------------------------|--|

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

| | |
|-------------------------------|--|
| Precautions for safe handling | : For further information refer to section 8: "Exposure controls/personal protection". Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid ignition sources. Wash thoroughly after handling. Handle and open container with care. |
| Hygiene measures | : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Safety shower. Eyewash station. |

7.2. Conditions for safe storage, including any incompatibilities

| | |
|--------------------|---|
| Storage conditions | : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Protect from sunlight. Do not store near heat sources or expose to high temperatures. Comply with applicable regulations. |
|--------------------|---|

7.3. Specific end use(s)

Not 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

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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.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses. Chemical goggles or safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

Other skin protection

Materials for protective clothing:

Wash hands thoroughly after handling. Eyewash station

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|-----------------------|
| Physical state | : Solid |
| Colour | : Yellow. white. |
| Odour | : mild. |
| Odour threshold | : Not available |
| Melting point | : Not applicable. |
| Freezing point | : Not applicable |
| Boiling point | : Not applicable |
| Flammability | : Non flammable. |
| Explosive limits | : Not applicable |
| Lower explosive limit (LEL) | : Not applicable |
| Upper explosive limit (UEL) | : 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 applicable |
| Vapour pressure at 50 °C | : Not available |
| Density | : Not available |
| Relative density | : Not available |
| Relative vapour density at 20 °C | : Not applicable |
| Particle size | : Not available |
| Particle size distribution | : Not available |
| Particle shape | : Not available |
| Particle aspect ratio | : Not available |
| Particle aggregation state | : Not available |
| Particle agglomeration state | : Not available |
| Particle specific surface area | : Not available |
| Particle dustiness | : 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.

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

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect from sunlight.

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10.5. Incompatible materials

Not available.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Hydrocarbons. Carbon oxides (CO, CO₂). Nitrogen oxides. Hydrogen cyanide. Sulphur oxides.

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

Rosin, potassium salts (61790-50-9)

| | |
|-----------------|--|
| LD50 dermal rat | > 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity) |
|-----------------|--|

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

| | |
|-----------------------|---|
| LD50 oral rat | > 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: EU Method B.1 (Acute Toxicity (Oral)), Guideline: other: Bewertung Wassergefährdender Stoffe, II Bestimmung der akuten, oralen Säugetiertoxizität, Ad-hoc-Arbeitsgruppe I (Obmann Dr. Niemits), LTWS, nr. 10, September 1979 |
| LD50 dermal rabbit | > 2000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 434 (Acute Dermal Toxicity - Fixed Dose Procedure) |
| LC50 Inhalation - Rat | > 0.1621 mg/l air Animal: rat |

Skin corrosion/irritation : Not available
pH: Not available
Serious eye damage/irritation : Not available
pH: 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 Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |
|----------------------------|--|

Aspiration hazard : Not available

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| | |
|----------------------|----------------|
| Viscosity, kinematic | Not applicable |
|----------------------|----------------|

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 |
| Not rapidly degradable | |

Rosin, potassium salts (61790-50-9)

| | |
|-----------------|-------------------------------------|
| LC50 - Fish [1] | 1.7 mg/l <i>Pimephales promelas</i> |
|-----------------|-------------------------------------|

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

| | |
|-----------------------------|---|
| ErC50 algae | 205.42 mg/l <i>Skeletonema costatum</i> (marine diatom) |
| LC50, aquatic invertebrates | 357.5 mg/l (copepod <i>Acartia tonsa</i>) |

12.2. Persistence and degradability

No additional information available

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

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|-------------------------|---|
| Waste treatment methods | : Dispose of via an authorised person/ licensed waste disposal contractor or by other suitable waste treatment techniques. Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. Incineration. Oil-Water Separation. |
|-------------------------|---|

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 applicable | Not applicable | Not applicable | Not applicable | Not applicable |

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14.2. UN proper shipping name

Not applicable

Not applicable

Not applicable

Not applicable

Not applicable

14.3. Transport hazard class(es)

Not applicable

Not applicable

Not applicable

Not applicable

Not applicable

14.4. Packing group

Not applicable

Not applicable

Not applicable

Not applicable

Not applicable

14.5. Environmental hazards

Not applicable

Not applicable

Not applicable

Not applicable

Not applicable

No supplementary information available

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

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

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

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 3, Highly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV)

: Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Storage class (LGK, TRGS 510)

: LGK 13 - Non-combustible solids that cannot be assigned to any of the above storage classes

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

15.2. Chemical safety assessment

A chemical safety assessment has been carried out for Resin acids and Rosin acids, potassium salts (CAS:61790-50-9) and Facid (CAS:67701-06-8).

SECTION 16: Other information

Abbreviations and acronyms:

| | |
|--------|---|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| BLV | Biological limit value |
| BOD | Biochemical oxygen demand (BOD) |
| COD | Chemical oxygen demand (COD) |
| DMEL | Derived Minimal Effect level |
| DNEL | Derived-No Effect Level |
| EC-No. | European Community number |
| EC50 | Median effective concentration |
| EN | European Standard |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| LOAEL | Lowest Observed Adverse Effect Level |
| NOAEC | No-Observed Adverse Effect Concentration |
| NOAEL | No-Observed Adverse Effect Level |
| 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 |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| STP | Sewage treatment plant |
| ThOD | Theoretical oxygen demand (ThOD) |
| TLM | Median Tolerance Limit |
| VOC | Volatile Organic Compounds |

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| | |
|---------|--|
| CAS-No. | Chemical Abstract Service number |
| N.O.S. | Not Otherwise Specified |
| vPvB | Very Persistent and Very Bioaccumulative |
| ED | Endocrine disrupting properties |

| Full text of H- and EUH-statements: | |
|-------------------------------------|---|
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| H319 | Causes serious eye irritation. |
| EUH210 | Safety data sheet available on request. |

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.