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Reviewed on 03/01/2017

1 Identification

· Product identifier

· Trade name: KMS Curl Up Wave Foam

· Article number: 127050 - 200ml

· Application of the substance / the mixture Hair Cosmetics

· Manufacturer/Supplier:

Kao USA Inc.

2535 Spring Grove Avenue Cincinnati, Ohio 45214 / USA KaoGermanySDS @kao.com

· Information department: CHEMTREC

Emergency telephone number: CHEMTREC (US): (0800) 424-9300

CHEMTREC (Outside US): +1 (703) 527-3887 (24h)

2 Hazard(s) identification

· Classification of the substance or mixture

Flam. Aerosol 2 H223-H229 Flammable aerosol. Pressurized container: May burst if heated.

- · Label elements
- · Hazard pictograms





GHS02 GHS04

- · Signal word Warning
- · Hazard statements

H223-H229 Flammable aerosol. Pressurized container: May burst if heated.

· Precautionary statements

Avoid breathing dust/fume/gas/mist/vapors/spray

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 0Fire = 0Reactivity = 3

· HMIS-ratings (scale 0 - 4)



Health = 0Fire = 0Reactivity = 3

- · Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable. · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.

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| · Dangerous components: (Contd. of page 1) | | | |
|--|------------|--|-----------------------|
| CAS: 78-78-4 | isopentane | Flam. Liq. 1, H224 Asp. Tox. 1, H304 STOT SE 3, H336 | 2.5-<10% |
| CAS: 75-28-5 | isobutane | Flam. Gas 1, H220 Press. Gas, H280 | 0.1- <u><</u> 2.5% |

4 First-aid measures

- · Description of first aid measures
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact: Generally the product does not irritate the skin.
- · After eye contact: Rinse opened eye for several minutes under running water.
- · After swallowing: If symptoms persist consult doctor.
- · Information for doctor: Treat symptomatically.
- · 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.

5 Fire-fighting measures

- Extinguishing media
- · Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- · Special hazards arising from the substance or mixture

No further relevant information available.

- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

- · Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · Methods and material for containment and cleaning up: Ensure adequate ventilation.
- · 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.

7 Handling and storage

- · Handling:
- · Precautions for safe handling Ensure good ventilation/exhaustion at the workplace.
- · Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles:

Observe official regulations on storing packagings with pressurized containers.

- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep receptacle tightly sealed.

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· Specific end use(s) No further relevant information available.

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: | | | | | |
|--|---|--|--|--|--|
| CAS: | CAS: 57-55-6 Methyl glycol (2.5-<10%) | | | | |
| WEEL | WEEL Long-term value: 10 mg/m³ | | | | |
| Glyce | Glycerin (2.5-<10%) | | | | |
| PEL | Long-term value: 15* 5** mg/m³ mist; *total dust **respirable fraction | | | | |
| TLV | TLV withdrawn-insufficient data human occup. exp. | | | | |
| CAS: 78-78-4 isopentane (2.5-<10%) | | | | | |
| PEL | Long-term value: 2950 mg/m³, 1000 ppm | | | | |
| TLV | Long-term value: 2950 mg/m³, 1000 ppm | | | | |
| CAS: | CAS: 75-28-5 isobutane (0.1- <u><</u> 2.%) | | | | |
| TLV | Short-term value: (2370) mg/m³, (1000) ppm NIC-EX | | | | |

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures: Wash hands before breaks and at the end of work.
- · Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Not required under normal conditions. The details concerned are recommendations.

The glove material has to be impermeable and resistant to the product / the substance / the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation. - Please contact the glove supplier for futher information.

· Material of gloves

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.

· Eve protection:



Not required under normal conditions If there is a risk of splashing: safety glasses

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| 9 Physical and chemical prope | erties | | | |
|---|--|--|--|--|
| · Information on basic physical and chemical properties | | | | |
| · General Information | | | | |
| · Appearance: | | | | |
| Form: | gel | | | |
| Color: | Colorless | | | |
| · Odor: | Characteristic | | | |
| · Odor threshold: | Not determined. | | | |
| · pH-value at 20 °C (68 °F): | 6 | | | |
| · Change in condition | | | | |
| Melting point/Melting range: | Undetermined. | | | |
| Boiling point/Boiling range: | Not applicable, as aerosol. | | | |
| · Flash point: | Not applicable, as aerosol. | | | |
| · Flammability (solid, gaseous): | Not applicable. | | | |
| · Decomposition temperature: | Not determined. | | | |
| · Auto igniting: | Product is not selfigniting. | | | |
| · Danger of explosion: | Not determined. | | | |
| · Vapor pressure at 20 °C (68 °F): | 23 hPa (17 mm Hg) | | | |
| · Density at 20 °C (68 °F): | 1.023 g/cm³ (8.537 lbs/gal) | | | |
| · Relative density | Not determined. | | | |
| · Vapor density | Not determined. | | | |
| Evaporation rate | Not applicable. | | | |
| · Solubility in / Miscibility with | | | | |
| Water: | Not miscible or difficult to mix. | | | |
| · Partition coefficient (n-octanol/wat | t er): Not determined. | | | |
| · Viscosity: | | | | |
| Dynamic at 20 °C (68 °F): | 18000 mPas | | | |
| Kinematic: | Not determined. | | | |
| · Solvent content: | | | | |
| Organic solvents: | 4.97 % | | | |
| Water: | 80.8 % | | | |
| VOC content: | 4.97 % | | | |
| Solids content: | 9.4 % | | | |
| · Other information | No further relevant information available. | | | |

10 Stability and reactivity

- · Reactivity No dangerous reactions known if used as directed.
- · Chemical stability The product is stable under standard conditions.
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

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11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:
- · Carcinogenic categories

| | Cui omogomo cutogomos | | |
|-------------------------------------|---|---------------------------|---|
| | · IARC (International Agency for Research on Cancer) | | |
| | CAS: 9003-39-8 | 1-Ethenylpyrrolidin-2-one | 3 |
| | CAS: 138-86-3 | (R)-p-mentha-1,8-diene | 3 |
| · NTP (National Toxicology Program) | | | |
| | None of the ingredients is listed. | | |
| Ī | · OSHA-Ca (Occupational Safety & Health Administration) | | |
| | None of the ingredients is listed. | | |
| | | | |

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · 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.
- · Additional ecological information:
- · General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

14 Transport information UN-Number DOT, ADR, IMDG, IATA UN1950 UN proper shipping name DOT Aerosols, flammable AEROSOLS IATA AEROSOLS, flammable

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| | (Contd. of page |
|---|--|
| Transport hazard class(es) | |
| DOT | |
| | |
| TEMMINICANS | |
| 2 | |
| Class | 2.1 |
| · Label | 2.1 |
| ADR | |
| | |
| | |
| | |
| Class | 2 5F Gases |
| · Label | 2.1 |
| IMDG, IATA | |
| | |
| | |
| 2 | |
| Class | 2.1 |
| Label | 2.1 |
| Packing group DOT, ADR, IMDG, IATA | - |
| Environmental hazards: | Not applicable. |
| Special precautions for user | Warning: Gases |
| Danger code (Kemler): | - |
| · EMS Number: · Stowage Code | F-D,S-U SW1 Protected from sources of heat. |
| olonage dode | SW22 For AEROSOLS with a maximum capacity |
| | 1 litre: Category A. For AEROSOLS with a capaci |
| | above 1 litre: Category B. For WASTE AEROSOL Category C, Clear of living quarters. |
| Segregation Code | SG69 For AEROSOLS with a maximum capacity of |
| | litre: Segregation as for class 9. Stow "separate |
| | from" class 1 except for division 1.4. For AEROSOL with a capacity above 1 litre: Segregation as for the |
| | appropriate subdivision of class 2. For WAS7 |
| | AEROSOLS: Segregation as for the appropria |
| | subdivision of class 2. |
| Transport in bulk according to Annex MARPOL73/78 and the IBC Code | II of Not applicable. |
| Transport/Additional information: | • |
| DOT | |
| · Quantity limitations | On passenger aircraft/rail: 75 kg |
| | On cargo aircraft only: 150 kg |
| IMDG | 41 |
| · Limited quantities (LQ) · Excepted quantities (EQ) | 1L Code: E0 |
| Excepted qualities (Eq) | Not permitted as Excepted Quantity |
| | (Contd. on page |

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· UN "Model Regulation": UN 1950 AEROSOLS, 2.1

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Sara
- · Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

CAS: 122-99-6 2-Phenoxyethanol

· TSCA (Toxic Substances Control Act):

All ingredients are 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 established by ACGIH)

None of the ingredients is listed.

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

None of the ingredients is listed.

· 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.

· Relevant phrases

H220 Extremely flammable gas.

H224 Extremely flammable liquid and vapor.

H280 Contains gas under pressure; may explode if heated.

H304 May be fatal if swallowed and enters airways.

H336 May cause drowsiness or dizziness.

- · Department issuing SDS: Regulatory Affairs
- · Date of preparation / last revision 03/01/2017 / -
- · Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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Safety Data Sheet acc. to OSHA HCS

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EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)

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

Flam. Gas 1: Flammable gases – Category 1 Flam. Aerosol 2: Aerosols – Category 2

Press. Gas: Gases under pressure – Compressed gas
Flam. Liq. 1: Flammable liquids – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Asp. Tox. 1: Aspiration hazard – Category 1

* Data compared to the previous version altered.