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Form no : 0101030041



SAFETY DATA SHEET

EMS FORCE® RT-41 Retainer (Removable)

according to Regulation (EC) No. 1907/2006(REACH) with its amendment Regulation (EC) No. 2015/830

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : EMS FORCE® RT-41 Retainer (Removable)
Contains : Methacrylic acid, monoester with propane-1,2-diol and Cumene hydroperoxide

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 : Medium viscosity, medium strength, anaerobic retaining compound for bonding of cylindrical mechanical connections.

1.3. Details of the supplier of the safety data sheet

Manufacturer/Supplier : **Metsan Endüstriyel Yapıştırıcılar Ticaret Anonim Şirketi**
Birlik Organize Sanayi Bölgesi Batı Caddesi 1.Sokak No.1
34953 Tuzla, İstanbul TURKEY
Telephone: +90 216 444 06 49
Telefax: +90 212 253 42 12
Web: www.metsan.gen.tr
Responsibility statement : For further information please contact with following e-mail address, sds@metsan.gen.tr

1.4. Emergency telephone number

Metsan: +90 212 235 52 55

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

According to Regulation (EC) No. 1272/2008 [CLP]

Skin sensitisation : Category 1 (H317)
Serious eye damage/eye irritation : Category 2 (H319)
Specific target organ toxicity — : Category 3 (H335)
Single exposure

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2.2. Label elements

According to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictogram(s)

GHS 07



Signal word

Warning

Hazard statement(s)

Physical hazards

: Not classified.

Health hazards

: H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation

Environmental hazards

: Not classified.

Precautionary statement(s)

Prevention

: P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response

: P333 + P313: If skin irritation or rash occurs: Get medical advice/ attention.

P337 + P313: If eye irritation persists: Get medical advice/attention.

Storage

: P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

Disposal

: P501: Dispose of contents/container to an appropriate disposal facility.

Supplemental information on label

Not applicable.

2.3. Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

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SECTION 3: Composition/information on ingredients

3.2. Mixtures

| Name | CAS No. EC No. | REACH Registration No. | wt% | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|-------------------------|---------------------------|--------------|---|
| Methacrylic acid, monoester with propane-1,2-diol | 27813-02-1 248-666-3 | 01-2119490226-37 | 65.0 - <85.0 | Skin Sens. 1- H317 Eye Dam. 2- H319 |
| Cumene | 98-82-8 202-704-5 | 01-2119473983-24 | 0.1 - <0.5 | Flam Liq 3- H226 Asp. Tox. 1- H304 STOT SE. 3- H335 Aquatic Chr. 2- H411 |
| Cumene hydroperoxide | 80-15-9 201-254-7 | 01-2119475796-19 | 1.0 - <3.0 | Org. Perox. EF- H242 Acute Tox. 4- H302 Acute Tox. 4- H312 Acute Tox. 3- H331 Skin Corr. 1B- H314 C \geq 10% Skin Corr 2- H315 3% \leq C<10% Eye Dam. 1- H318 %3 \leq C<%10 Eye irrit. 2-H319 %1 \leq C<%3 STOT SE 3- H335 C<%10 STOT RE 2- H373 Asp. Tox. 1- H304 Aquatic Chr. 2- H411 |

- Up to the given revision date of this safety data sheet only the above mentioned REACH registration numbers are assigned to the chemical substances used in this mixture.

Additional information

See full text of H-phrases and classification codes in chapter 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

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Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion

If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Skin contact

Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Eye contact

Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Self-protection of the first aider

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

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

Please see practical experience in Section 11.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

Unsuitable extinguishing media

Do not use high power water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

Closed containers exposed to heat from fire may build pressure and explode. Exposure to extreme heat can give rise to thermal decomposition.

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Hazardous decomposition or by-products

Carbon dioxide
Carbon monoxide
Nitrogen oxides
Sulfur oxides

5.3. Advice for firefighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. When firefighting conditions are severe and total thermal decomposition of the product is possible, wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, tunic and trousers (leggings), bands (around arms, waist and legs), face mask, and protective covering for exposed areas of the head.

Special protective equipment and firefighting procedures

There is no specific recommended protective equipment other than suggested above.

Additional information

In case of fire, keep containers cool with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Refer to Section 8 of SDS for personal protection details. If outside do not approach from downwind. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorized personnel. Turn leaking containers leak-side up to prevent the escape of liquid.

6.2. Environmental precautions

Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems. Please avoid any emission of volatile organic compounds as possible.

6.3. Methods and materials for containment and cleaning up

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Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations. The contaminated area should be cleaned up immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts), concentrated (density: 0,880) ammonia solution (5 parts). After usage of suitable decontaminant, transfer the material to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

For appropriate self-protection equipment, please apply the suggested protection procedures given in Section 8.

For disposal of waste, please see advices in Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Safe handling advice

Avoid inhalation of thermal decomposition products. For industrial or professional use only. Store work clothes separately from other clothing, food and tobacco products. Do not handle until all safety precautions have been read and understood. Wash contaminated clothing before reuse. Avoid breathing vapours. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Store in original containers at 8-21°C (46.4-69.8°F) and do not return residual materials to containers as contamination may reduce the shelf life of the bulk product.

Advice on common storage

Store separately from oxidizing agents, strongly alkaline and strongly acidic materials, amines, alcohols and water. Do not store together with explosives, gases, oxidizing solids, products which form flammable gases in contact with water, oxidizing products, infectious products and radioactive products.

Additional information on storage conditions

Protect against UV and sunlight. Keep away from heat sources and humid media.

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7.3. Specific end use(s)

Fixing and sealing of metallic pipes and fittings.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community / national occupational exposure limit values

| Cumene hydroperoxide (CAS No: 80-15-9) | | | | |
|--|---------------------------|-------------------|--------------------------|-------------------|
| | Limit value – Eight hours | | Limit value – Short term | |
| | ppm | mg/m ³ | ppm | mg/m ³ |
| Latvia | - | 1 | - | - |

| Cumene (CAS No: 98-82-8) | | | | |
|--------------------------|---------------------------|-------------------|--------------------------|-------------------|
| | Limit value – Eight hours | | Limit value – Short term | |
| | ppm | mg/m ³ | ppm | mg/m ³ |
| Australia | 25 | 125 | 75 | 375 |
| Austria | 20 | 100 | 50 | 250 |
| Belgium | 20 | 100 | 50 | 250 |
| Canada - Ontario | 50 | | | |
| Canada - Québec | 50 | 246 | | |
| Denmark | 20 | 100 | 40 | 200 |
| European Union | 20 | 100 | 50 | 250 |
| Finland | 20 | 100 | 50 | 250 |
| France | 20 | 100 | 50 | 250 |
| Germany (AGS) | 10 | 50 | 40 | 200 |
| Germany (DFG) | 10 | 50 | 40 | 200 |
| Hungary | | 100 | | 250 |
| Ireland | 20 | 100 | 50 | 250 |
| Italy | 20 | 100 | 50 | 250 |
| Latvia | 20 | 100 | 50 | 250 |
| New Zealand | 25 | 125 | 75 | 375 |
| Poland | | 100 | | 250 |
| Singapore | 50 | 246 | | |
| South Korea | 50 | 245 | | |
| Spain | 20 | 100 | 50 | 250 |
| Sweden | 25 | 120 | 35 | 170 |
| Switzerland | 20 | 100 | 80 | 400 |
| The Netherlands | | 100 | | 250 |
| Turkey | 20 | 100 | 50 | 250 |
| USA - NIOSH | 50 | 245 | | |

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| | | | | |
|----------------|----|-----|----|-----|
| USA - OSHA | 50 | 245 | | |
| United Kingdom | 25 | 125 | 75 | 375 |

- OEL values that are given in this subsection are taken from GESTIS International Limit Values database.
- If a component is disclosed in Section 3 but does not appear in the table given above, an occupational exposure limit value is not available for the corresponding component.

Information on monitoring procedures

DN(M)ELs

| CAS No. | Chemical name | End use | Exposure routes | Frequency of exposure | Type | Value |
|------------|---|-----------|-----------------|-----------------------|----------------|---|
| 27813-02-1 | Methacrylic acid, monoester with propane-1,2-diol | Workers | Inhalation | Chronic | Not specified. | 14.7 mg/m ³ |
| | | Workers | Dermal | Chronic | Not specified. | 4.2 mg/kg |
| | | Consumers | Dermal | Chronic | Not specified. | 2.5 mg/kg |
| | | Consumers | Inhalation | Chronic | Not specified. | 8.8 mg/m ³ |
| | | Consumers | Oral | Chronic | Not specified. | 2.5 mg/kg |
| 80-15-9 | Cumene hydroperoxide | Workers | All routes | - | - | WARNING: Some DNEL/PNEC values exist in the REACH disseminated dossier(s), but we are not confident in these data |
| | | Consumers | All routes | - | - | WARNING: Some DNEL/PNEC values exist in the REACH disseminated dossier(s), but we are not confident in these data |
| 98-82-8 | Cumene | Consumers | Inhalation | Chronic | Systemic | 16.6 mg/m ³ Repeated dose toxicity |
| | | Consumers | Oral | Chronic | Systemic | 5 mg/kg bw/day Repeated dose toxicity |

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- If a component is disclosed in Section 3 but does not appear in the table given above, a DN(M)EL is not available for the corresponding component.

PNECs

| CAS No. | Chemical name | Environmental protection target | Value | Extrapolation method |
|------------|---|---------------------------------|---------------------------|--------------------------|
| 27813-02-1 | Methacrylic acid, monoester with propane-1,2-diol | Freshwater | 0.904 mg/L | Assessment factor: 50 |
| | | Marine water | 0.904 mg/L | Assessment factor: 50 |
| | | Intermittent releases | 0.972 mg/L | Assessment factor: 100 |
| | | STP | 10 mg/L | Assessment factor: 10 |
| | | Sediment (freshwater) | 6.28 mg/kg sediment dw | Partition coefficient |
| | | Sediment (marine water) | 6.28 mg/kg sediment dw | Partition coefficient |
| | | Soil | 0.727 mg/kg soil dw | Partition coefficient |
| 80-15-9 | Cumene hydroperoxide | Freshwater | 0.003 mg/L | Assessment factor: 1000 |
| | | Marine water | 0 mg/L | Assessment factor: 10000 |
| | | Intermittent releases | 0.031 mg/L | Assessment factor: 100 |
| | | STP | 0.35 mg/L | Assessment factor: 1 |
| | | Sediment (freshwater) | 0.023 mg/kg sediment dw | Partition coefficient |
| | | Sediment (marine water) | 0.002 mg/kg sediment dw | Partition coefficient |
| | | Soil | 0.003 mg/kg soil dw | Partition coefficient |
| 98-82-8 | Cumene | Freshwater | 35 µg/L | Assessment factor: 10 |
| | | Marine water | 3.5 µg/L | Assessment factor: 100 |
| | | Intermittent releases | 12 µg/L | Assessment factor: 100 |
| | | STP | 200 mg/L | Assessment factor: 10 |
| | | Sediment (freshwater) | 3.22 mg/kg çökelti dw | Partition coefficient |
| | | Sediment (marine water) | 322 µg/kg sediment dw (1) | Partition coefficient |
| | | Soil | 624 µg/kg soil dw (1) | Partition coefficient |

- If a component is disclosed in Section 3 but does not appear in the table given above, a PNEC is not available for the corresponding component.

8.2. Exposure controls

Appropriate engineering controls

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Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Personal protective equipment :



Eye protection : Safety glasses with side shields or chemical safety goggles should be worn if there is a risk of splashing of material.

Skin protection : Hand and other skin protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Gloves made from the following material(s) are recommended:
- Butyl rubber at least 0.5 mm thickness
- Fluoroelastomer at least 0.4 mm thickness

Respiratory protection : In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Environmental exposure controls

Do not let product enter drains. For ecological information refer to Section 12. Also, check for Environmental Precautions in Section 6.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

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Appearance : Liquid
Color : Yellow
Odor : Acrylate, characteristic
Odor threshold : No data available.

| <u>Property</u> | <u>Values</u> | <u>Method(s) and remark(s)</u> |
|---|--------------------|--------------------------------|
| pH | Not applicable. | |
| Melting point/freezing point | Not applicable. | |
| Initial boiling point and boiling range | >149°C | |
| Flash point | >100°C | |
| Evaporation rate | Negligible. | |
| Flammability (solid, gas) | Not applicable. | |
| Flammability limit in air | | |
| Upper flammability limit | Not applicable. | |
| Lower flammability limit | Not applicable. | |
| Vapor pressure | <666.6 Pa | at 26.5°C |
| Vapor density | No data available. | |
| Relative density | 1.0 | at 20°C (Ref. water at 20°C) |
| Solubility(ies) | | |
| In water | Not miscible. | at 25°C |
| In other solvent(s) | No data available. | |
| Partition coefficient: n-octanol/water | No data available. | |
| Auto-ignition temperature | Not applicable. | |
| Decomposition temperature | No data available. | |
| Viscosity | 700 cPs | at 20°C |
| Explosive properties | Not classified. | |
| Oxidising properties | Not classified. | |

9.2. Other data

| <u>Property</u> | <u>Values</u> | <u>Method(s) and remark(s)</u> |
|-----------------------|--------------------|--------------------------------|
| Softening temperature | No data available. | |
| VOCs content | No data available. | |

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Density : 1.0 g/cm³ at 20°C

SECTION 10: Stability and reactivity

10.1. Reactivity

Keep away from oxidising agents and strongly acid or alkaline materials. Mixture can rapidly react with these materials and produce CO₂. Evolution of CO₂ in closed containers causes overpressure and produces a risk of bursting.

10.2. Chemical stability

The product is chemically stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization reaction may occur in large quantities only.

10.4. Conditions to avoid

Stable under recommended storage and handling conditions (see Section 7).

10.5. Incompatible materials to avoid

Refer to reactivity in this section.

10.6. Hazardous decomposition products

Refer to Section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

General observations

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Due to the absence of specific data on the mixture regarding interactions between component substances, relevant health effects of each substance are listed. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Practical experience

No information available

Acute toxicity

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| CAS No. | Chemical name | Species | Type | Exposure duration | Value | Method(s) and/or reference(s) and/or note(s) |
|------------|---|---------|----------------------|-------------------|--------------------|--|
| 27813-02-1 | Methacrylic acid, monoester with propane-1,2-diol | Rat | LD50 Oral | - | >2000 mg/kg bw | OECD Guideline 401 (Acute Oral Toxicity) |
| | | Rabbit | LD50 Dermal | 24 h | >5000 mg/kg bw | - |
| | | Rat | LD50 Intraperitoneal | - | 500-1000 mg/kg bw | - |
| 80-15-9 | Cumene hydroperoxide | Rat | LD50 Oral | - | 382 mg/kg bw | - |
| | | Rat | LC50 Inhalation | 4 h | 220 ppm | - |
| | | Rat | LD50 Dermal | - | 1.20-1.52 mg/kg bw | - |
| 98-82-8 | Cumene | Rat | LD50 Oral | - | 2 910 mg/kg bw | - |
| | | Rat | LC0 Inhalation | 1 h | 22.1 mg/L air | - |
| | | Rabbit | LD50 Dermal | 24 h | > 3 160 mg/kg bw | - |

Skin corrosion/irritation

| CAS No. | Chemical name | Species | Exposure duration | Result | Method(s) and/or reference(s) and/or note(s) |
|------------|---|---------|-------------------|-----------------------|--|
| 27813-02-1 | Methacrylic acid, monoester with propane-1,2-diol | Rabbit | 24 h | Not irritating | - |
| 80-15-9 | Cumene hydroperoxide | Rabbit | 72 h | Strong skin reactions | - |
| 98-82-8 | Cumene | Rabbit | 72 h | Not irritating | OECD Guideline 404 |

Serious eye damage/irritation

| CAS No. | Chemical name | Species | Exposure duration | Result | Method(s) and/or reference(s) and/or note(s) |
|------------|---|---------|-------------------|-------------------|--|
| 27813-02-1 | Methacrylic acid, monoester with propane-1,2-diol | Rabbit | 72 h | Not irritating | - |
| 80-15-9 | Cumene hydroperoxide | Rabbit | 24 h | Severe irritation | - |

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| | | | | | |
|---------|--------|--------|------|----------------|--------------------|
| 98-82-8 | Cumene | Rabbit | 72 h | Not irritating | OECD Guideline 404 |
|---------|--------|--------|------|----------------|--------------------|

Respiratory or skin sensitisation

| CAS No. | Chemical name | Species | Exposure duration | Result | Method(s) and/or reference(s) and/or note(s) |
|------------|---|------------|-------------------|-----------------|--|
| 27813-02-1 | Methacrylic acid, monoester with propane-1,2-diol | Human | - | Not sensitising | - |
| | | Guinea pig | - | Not sensitising | - |
| 98-82-8 | Cumene | Guinea pig | 48 h | Not sensitising | OECD Guideline 406 |

Germ cell mutagenicity

| CAS No. | Chemical name | Species | Type | Route | Result | Method(s) and/or reference(s) and/or note(s) |
|------------|---|---------------------------|----------------------|----------|---------------|--|
| 27813-02-1 | Methacrylic acid, monoester with propane-1,2-diol | Chinese hamster Ovary | Gene mutation | In vitro | Not mutagenic | OECD Guideline 476 |
| | | Escherichia coli WP2 uvrA | Gene mutation | In vitro | Not mutagenic | OECD Guideline 472 |
| | | Mouse | Oral | In vivo | Not mutagenic | OECD Guideline 474 |
| 80-15-9 | Cumene hydroperoxide | MX100 | Gene mutation | In vitro | Mutagenic | - |
| | | PQ300, PQ37 | Gene mutation | In vitro | Mutagenic | - |
| | | Mouse | Dermal | In vivo | Not mutagenic | - |
| | | Mouse | Intraperitoneal | In vivo | Not mutagenic | - |
| 98-82-8 | Cumene | Chinese hamster Ovary | Gene mutation | In vitro | Not mutagenic | OECD Guideline 476 |
| | | Mouse | Chromosom aberration | In vivo | Not mutagenic | OECD Guideline 474 |

Carcinogenicity

| CAS No. | Chemical name | Species | Type | Exposure duration | Result | Method(s) and/or reference(s) and/or note(s) |
|---------|---------------|---------|------|-------------------|--------|--|
|---------|---------------|---------|------|-------------------|--------|--|

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| | | | | | | |
|------------|---|-------|--------------|---|---------------------------------|--------------------|
| 27813-02-1 | Methacrylic acid, monoester with propane-1,2-diol | Mouse | Inhalation | - | No evidence of carcinogenicity. | OECD Guideline 451 |
| | | Rat | Inhalation | - | No evidence of carcinogenicity. | OECD Guideline 451 |
| | | Rat | Oral | - | No evidence of carcinogenicity. | - |
| 80-15-9 | Cumene hydroperoxide | Mouse | Subcutaneous | - | Inconclusive result | - |
| 98-82-8 | Cumene | Mouse | Inhalation | - | Inconclusive result | OECD Guideline 451 |

Reproductive toxicity

| CAS No. | Chemical name | Species | Type | Exposure duration | Result | Method(s) and/or reference(s) and/or note(s) |
|------------|---|---------|------------|-------------------|-------------------------|--|
| 27813-02-1 | Methacrylic acid, monoester with propane-1,2-diol | Rat | Oral | 49 days | NOAEL 1630 mg/kg bw/day | - |
| 98-82-8 | Cumene | Rat | Inhalation | 90 days | NOAEL >= 1 200 ppm | OECD Guideline 413 |

STOT – Single exposure

No information available.

STOT – Repeated exposure

No information available.

Aspiration hazard

No information available.

SECTION 12: Ecological information

12.1. Toxicity

No test data available for the product.

Acute (short-term) toxicity

| CAS No. | Chemical name | Species | Exposure duration | Test endpoint | Result | Method(s) and/or reference(s) and/or note(s) |
|---------|---------------|---------|-------------------|---------------|-------------|--|
| | | | 48 h | LC95 | 1001.3 mg/L | |

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| | | | | | | |
|------------|---|-------------------------------|------|-------|------------|--------------------|
| 27813-02-1 | Methacrylic acid, monoester with propane-1,2-diol | Scophthalmus maximus (fish) | 96 h | LC50 | 833 mg/L | - |
| | | Copepoda (invertebrates) | 48 h | EC50 | 210 mg/L | - |
| 80-15-9 | Cumene hydroperoxide | Oncorhynchus mykiss (fish) | 96 h | NOEC | 1.5 mg/L | OECD Guideline 203 |
| | | | | LC50 | 3.9 mg/L | |
| | | | | LC100 | 6.0 mg/L | |
| | | Daphnia magna (invertebrates) | 24 h | EC0 | 2.2 mg/L | - |
| | | | | EC50 | 7.0 mg/L | |
| | | | | EC100 | 25 mg/L | |
| 98-82-8 | Cumene | Cyprinodon variegatus (fish) | 96 h | NOEC | < 2.9 mg/L | - |
| | | | 96 h | LC50 | 4.7 mg/L | - |
| | | | 72 h | LC50 | 4.8 mg/L | - |
| | | | 48 h | LC50 | 5.7mg/L | - |
| | | | 24 h | LC50 | 8.1 mg/L | - |
| | | Daphnia magna (invertebrates) | 48 h | EC50 | 2.14 mg/L | - |
| | | | 48 h | EC10 | 1.3 mg/L | - |
| | | | 48 h | NOEC | 1.6 mg/L | - |
| | | | 24 h | EC50 | 2.45 mg/L | - |
| | | | 24 h | EC10 | 1.4 mg/L | - |
| | | | 24 h | NOEC | 1.6 mg/L | - |

Chronic (long-term) toxicity

| CAS No. | Chemical name | Species | Exposure duration | Test endpoint | Result | Method(s) and/or reference(s) and/or note(s) |
|------------|---|-------------------------------|-------------------|---------------|-----------|--|
| 27813-02-1 | Methacrylic acid, monoester with propane-1,2-diol | Daphnia magna (invertebrates) | 21 days | NOEC | 45.2 mg/L | OECD Guideline 211 |
| 98-82-8 | Cumene | P.promelas (fish) | 28 day | NOEC | 0.38 mg/L | |
| | | Daphnia magna (invertebrates) | 21 day | NOEC | 0.35 mg/L | OECD Guideline 211 |
| | | | | NOEC | 0.68 mg/L | |

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Toxicity to aquatic algae and cyanobacteria

| CAS No. | Chemical name | Species | Exposure duration | Test endpoint | Result | Method(s) and/or reference(s) and/or note(s) |
|------------|---|--------------------------------|-------------------|---------------|------------|--|
| 27813-02-1 | Methacrylic acid, monoester with propane-1,2-diol | Pseudokirchnerella subcapitata | 72 h | EC50 | >97.2 mg/L | OECD Guideline 201 |
| 80-15-9 | Cumene hydroperoxide | Scenedesmus quadricauda | 8 days | EC3 (TT) | 7.4 mg/L | - |
| | | Desmodesmus subspicatus | 72 h | EC50 | 3.1 mg/L | OECD Guideline 201 |
| | | | | NOEC | 1.0 mg/L | |
| 98-82-8 | Cumene | Desmodesmus subspicatus | 72 h | EC50 | 2.01 mg/L | - |
| | | | 72 h | EC10 | 1.35 mg/L | |
| | | | 72 h | NOEC | 1.49 mg/L | |
| | | | 72 h | EC50 | 1.29 mg/L | |
| | | | 72 h | EC10 | 0.697 mg/L | |
| | | | 72 h | NOEC | 0.73 mg/L | |

12.2. Persistence and degradability

The product can be biodegradable as its ingredients are all classified as biodegradable.

| CAS No. | Chemical name | Test type | Study type | Duration | Degradation % | Method(s) and/or reference(s) and/or note(s) |
|------------|---|------------------------|----------------------------|----------|---------------|--|
| 27813-02-1 | Methacrylic acid, monoester with propane-1,2-diol | Ready biodegradability | BOD | 28 days | 81% | OECD Guideline 301 C |
| | | | TOC | | 93% | |
| | | | GC | | 100% | |
| 80-15-9 | Cumene hydroperoxide | Ready biodegradability | CO ₂ evolution | 5 days | 64% | OECD Guideline 301 B |
| | | | | 28 days | 99% | |
| 98-82-8 | Cumene | Ready biodegradability | O ₂ consumption | 20 day | %0 | - |

12.3. Bioaccumulative potential

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| CAS No. | Chemical name | Log K _{ow} | BCF | Result | Method(s) and/or reference(s) and/or note(s) |
|------------|---|---------------------|-------|-------------------------------|--|
| 27813-02-1 | Methacrylic acid, monoester with propane-1,2-diol | 0.97 | 3.2 | No bioaccumulation potential. | - |
| 80-15-9 | Cumene hydroperoxide | 2.16 | 9 | No bioaccumulation potential. | - |
| 98-82-8 | Cumene | 3.5 | 94.69 | No bioaccumulation potential | - |

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

Based on available data no ingredient is classified for this hazard property (please see section 3).

12.6. Other adverse effects

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is classified for eco-toxicological properties accordingly. See sections 2 and 3 for details.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of in accordance with local regulations.

- Product disposal : Contribution of this product to waste is very insignificant in comparison to article in which it is used.
- Packaging disposal : After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Waste disposal number of waste from residues/unused products

- 08 04 09 : WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of

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adhesives and sealants (including waterproofing products);
waste adhesives and sealants containing organic solvents or
other dangerous substances Classified as hazardous waste.

Waste disposal number of used product

08 04 09 : WASTES FROM THE MANUFACTURE, FORMULATION,
SUPPLY AND USE (MFSU) OF COATINGS (PAINTS,
VARNISHES AND VITREOUS ENAMELS), ADHESIVES,
SEALANTS AND PRINTING INKS; wastes from MFSU of
adhesives and sealants (including waterproofing products);
waste adhesives and sealants containing organic solvents or
other dangerous substances Classified as hazardous waste.

Waste disposal number of used product

15 01 10 : WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS,
FILTER MATERIALS AND PROTECTIVE CLOTHING NOT
OTHERWISE SPECIFIED; packaging (including separately
collected municipal packaging waste); packaging containing
residues of or contaminated by dangerous substances
Classified as hazardous waste.

SECTION 14: Transport information

14.1. UN number

Not hazardous according to ADR, ADN, RID, IMDG and IATA.

14.2. UN proper shipping name

Not hazardous according to ADR, ADN, RID, IMDG and IATA.

14.3. Transport hazard class(es)

Not hazardous according to ADR, ADN, RID, IMDG and IATA.

14.4. Packaging group

Not hazardous according to ADR, ADN, RID, IMDG and IATA.

14.5. Environmental hazards

Not hazardous according to ADR, ADN, RID, IMDG and IATA.

14.6. Special precautions for user

Not hazardous according to ADR, ADN, RID, IMDG and IATA.

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14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

SECTION 15: Regulatory information

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

Australia (AICS)

All ingredients are on the inventory or exempt from listing.

Canada (DSL)

All ingredients are on the inventory or exempt from listing.

Canada (NDSL)

None of the ingredients are on the inventory of NDSL.

China (IECSC)

All ingredients are on the inventory or exempt from listing.

European Union (EINECS)

All ingredients are on the inventory or exempt from listing.

European Union (ELINCS)

None of the ingredients are on the inventory of ELINCS.

Japan (ENCS)

All ingredients are on the inventory or exempt from listing.

Philippines (PICCS)

All ingredients are on the inventory or exempt from listing.

South Korea (KECI)

All ingredients are on the inventory or exempt from listing.

Taiwan (TCSI)

All ingredients are on the inventory or exempt from listing.

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United States of America (TSCA)

All ingredients are on the inventory or exempt from listing.

15.2. Chemical Safety Assessment

No safety checks were carried out on the mixture.

SECTION 16: Other information

Information taken from reference works and the literature

This SDS is prepared via using latest available SDS of ingredients that are provided from the manufacturers. Also, to confirm the validity of data and to give all necessary information, several databases are used. This references are listed below.

Substance number : CAS No. – <https://scifinder.cas.org>
OEL values : GESTIS – <http://limitvalue.ifa.dguv.de/>
DN(M)EL and PNEC values : ECHA – <http://echa.europa.eu/information-on-chemicals>
Inventories given in Section 15 : AICS – <http://nicnas.gov.au/search>
DSL & NDSL – http://ec.gc.ca/lcpe-cepa/eng/substance/chemicals_polymers.cfm
IECSC – <http://cciss.cirs-group.com/>
EINECS & ELINCS– <http://echa.europa.eu/information-on-chemicals/ec-inventory>
ENCS – <http://safe.nite.go.jp/english/db.html>
KECI – <http://ncis.nier.go.kr/totinfo/TotInfoList.jsp>
PICCS –
<http://119.92.161.5/internal/public/searchprojects.aspx>
TCSI - <http://csnn.osha.gov.tw/content/home/index.aspx>
TSCA - <http://www.epa.gov/tsca-inventory>

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
AGS : The German Committee on Hazardous Substances

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| | |
|---------------------|---|
| AICS | : Australian Inventory of Chemical Substances |
| ATE | : Acute Toxicity Estimate |
| BCF | : Bioconcentration factor |
| BOD | : Biological Oxygen Demand |
| CAS | : Chemical Abstracts Service |
| CLP | : Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| DFG | : German Research Foundation |
| DN(M)EL | : Derived No (Minimal) Effect Level |
| DSD | : Dangerous Substances Directive 67/548/EEC |
| DSL | : Domestic Substances List |
| EC | : European Community |
| EC0 | : Effective Concentration that Produces a Stimulation Index of 0 |
| EC3 | : Effective Concentration that Produces a Stimulation Index of 3 |
| EC50 | : Half Maximal Effective Concentration |
| EINECS | : European Inventory of Existing Commercial Substances |
| ELINCS | : European List of notified Chemical Substances |
| EN | : European Standard |
| ENCS | : Japanese Existing and New Chemical Substances Inventory |
| GHS | : Globally Harmonized System |
| IATA | : International Air Transport Association |
| ICAO-TI | : Technical Instructions for the Safe Transport of Dangerous Goods by Air |
| IECSC | : Inventory of Existing Chemical Substances in China |
| IMDG | : International Maritime Dangerous Goods |
| KECI | : Korea Existing Chemicals Inventory |
| LC50 | : Lethal Concentration to 50 % of a test population |
| LD50 | : Lethal Dose to 50% of a test population (Median Lethal Dose) |
| LOEC | : Lowest Observable Effect Concentration |
| Log K _{ow} | : Log10 of octanol-water partition coefficient |

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| | |
|-------|---|
| NDSL | : Non-Domestic Substances List |
| NIOSH | : The National Institute for Occupational Safety and Health |
| NOEC | : No Observed Effect Concentration |
| OECD | : Organization for Economic Co-operation and Development |
| OEL | : Occupational Exposure Limit |
| OSHA | : Occupational Safety & Health Administration |
| OSHA | : European Agency for Safety and Health at work |
| PBT | : Persistent, Bioaccumulative and Toxic substance |
| PICCS | : Philippine Inventory of Chemicals and Chemical Substances |
| 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 |
| STOT | : Specific Target Organ Toxicity |
| TCSI | : Taiwan Chemical Substance Inventory |
| TOC | : Total Organic Carbon |
| TSCA | : Toxic Substances Control Act |
| VOC | : Volatile Organic Compound |
| vPvB | : Very Persistent and Very Bioaccumulative |

Full text of classification codes

| | |
|------------------|------------------------------------|
| Acute Tox. 3 | : Acute toxicity – Category 3 |
| Acute Tox. 4 | : Acute toxicity – Category 4 |
| Aquatic Acute. 1 | : Aquatic acute – Category 1 |
| Aquatic Chr. 2 | : Aquatic chronic – Category 2 |
| Asp. Tox. 1 | : Aspiration toxicity – Category 1 |
| Eye Dam. 1 | : Eye damage – Category 1 |
| Eye Dam. 2 | : Eye damage – Category 2 |
| Flam Liq 3 | : Flammable liquid - Category 3 |
| Org. Perox. EF | : Organic peroxide – Type E & F |

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| | |
|---------------|--|
| Skin Corr 2 | : Skin corrosion/irritation, - Category 2 |
| Skin Corr. 1B | : Skin corrosion – Category 1B |
| Skin Sens. 1 | : Skin sensitization – Category 1 |
| STOT RE 2 | : Specific target organ toxicity – Repeated exposure – Category2 |
| STOT RE 3 | : Specific target organ toxicity – Repeated exposure – Category3 |

Full text of H phrases with no. appearing in Section 3

| | |
|------|--|
| H242 | : Heating may cause a fire. |
| H226 | : Flammable liquid and vapour. |
| H302 | : Harmful if swallowed. |
| H304 | : May be fatal if swallowed and enters airways. |
| H312 | : Harmful in contact with skin. |
| H314 | : Causes severe skin burns and eye damage. |
| H315 | : Causes skin irritation. |
| H317 | : May cause an allergic skin reaction. |
| H318 | : Causes serious eye damage. |
| H319 | : Causes serious eye irritation. |
| H331 | : Toxic if inhaled. |
| H335 | : May cause respiratory irritation. |
| H373 | : May cause damage to organs through prolonged or repeated exposure. |
| H400 | : Very toxic to aquatic life. |
| H411 | : Toxic to aquatic life with long-lasting effects. |

Revision changes

Version 1.0 – All sections and data are modified to comply with Regulation (EC) No. 1907/2006(REACH) with its amendment Regulation (EC) No. 2015/830.

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Additional information

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