

Material Safety Data Sheet

Issue Date: 19-09-2011

Material/Trade Name: EMS FORCE EA 5543

1 – Identification of the Preparation and Company

Material/Trade Name : EMS FORCE EA 5543
Material Type : Methacrylate based anaerobic pipe sealant
Company : Ems Grup Endüstri ve Hırdavat Malzemeleri Ltd.Şti.
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2 – Composition/Information on Ingredients

| Substance | | Wt. % | CAS No. | EC No. |
|-----------------------------|---|-------------|----------|-----------|
| 2-Hydroxypropylmethacrylate | Xi:R36 R43 | 2.5 - 10 | 923-26-2 | 213-090-3 |
| Cumene hydroperoxide | O:R7 T:R23 Xn:R21/22, 48/20/22 C:R34 N:51,53 | 1 - 3 | 80-15-9 | 201-254-7 |
| Acrylic acid | R10 Xn:R20/21/22 C:R35 N:R50 | 0.5 – 2.5 | 79-10-7 | 201-177-9 |
| N,N-Dimethyl-p-toluidine | T:R23/24/25 R33 R52/53 | 0.10 - 0.95 | 99-97-8 | 202-805-4 |
| 1-Acetyl-2-phenylhydrazine | Xn:R20/21/22 R40 Xi:R36/37/38 R43 | 0.10 - 0.95 | 114-83-0 | 204-055-3 |
| Cumene | R10 Xn:R65 Xi:R37 N:R51,53 | 0.1 - 0.5 | 98-82-8 | 202-704-5 |

3 - Hazards Identification

MAY CAUSE SEVERE EYE DAMAGE.
IRRITATING TO EYES, SKIN AND RESPIRATORY SYSTEM
MAY CAUSE SENSITISATION BY SKIN CONTACT
Do not inhale fumes or vapours.
Avoid contact with skin and eyes.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Wear suitable gloves.
Use only in well-ventilated areas.
Prolonged or repeated over-exposure may lead to sensitising effects and/or dermatitis in sensitive individuals.

4 - First-aid Measures

Inhalation: Remove to fresh air and rest. If not breathing, give artificial respiration. If recovery is not rapid call for prompt medical attention.

Eyes: Immediately irrigate with water for at least 15 minutes. Take care not to wash chemical from one eye to another. Get prompt medical attention.

Skin: Remove contaminated clothing and shoes. Wash with soap/cleanser and rinse with plenty of water. If irritation persists, obtain medical attention.

Ingestion: Do not induce vomiting. Give plenty of water to drink. Beware of aspiration if vomiting occurs - seek medical attention immediately.



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5 - Fire-fighting Measures

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| Suitable Extinguishers: | Foam | Dry powder | Carbon dioxide |
| Unsuitable Extinguishers: | Direct water jets | | |
| Hazardous Decomposition: | Possible risk of explosion. Toxic fumes are produced in fire – CO, CO ₂ , oxides of nitrogen may possibly evolve. | | |
| Special Procedures: | Do not breathe decomposition products and fumes. Use approved self-contained breathing apparatus. Wear fire retardant clothing. Wear eye protection. Use water spray to cool containers. Prevent runoff from fire control from entering waterways. Large fires should only be dealt with by trained personnel. | | |

6 - Accidental Release Measures

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| Exposure Controls: | Ventilate area. Evacuate all personnel. Use barriers to prevent unauthorised entry into contaminated areas. Do not allow spill to enter drains and watercourses. |
| Personal Protection: | Wear suitable respiratory protection for large spillages and in confined spaces, e.g. EN405 FFA2 or EN140 A2. Wear polythene gloves. Wear chemically resistant overalls and boots Use eye protection such as goggles to BS EN 166 Chemical Grade. |
| Disposal Considerations: | Absorb in inert material such as sand or absorbent granules Scoop up and place in plastic container to await transfer Dispose in accordance with local regulations |

7 - Handling and Storage

| | |
|------------------|--|
| Handling: | Avoid skin and eye contact. Avoid inhalation of vapours. Wear gloves (polythene, neoprene or if only exposed for short periods (<15mins) latex) and eye protection. If handling large quantities, wear suitable protective clothing. |
| Storage: | Store in tightly closed, labelled containers. Do not allow to contact or store in aluminium, mild steel, rusty steel, copper (or alloys of) or tin vessels. Store in a cool, dry, well-ventilated area out of direct sunlight. Keep away from sources of ignition and fire. |

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8 - Exposure Controls/Personal Protection

Occupational Exposure Limit: OES for acrylic acid is 10ppm (30mg/m³) 8hr TWA and 20ppm (60mg/m³) 15min STEL (EH40/2002).
Wear gloves - polythene, neoprene or if only exposed for short periods (<15mins) latex.
Wear suitable eye protection, such as rated to BS EN 166
After skin contact, wash immediately with plenty of water.
If handling large quantities, wear suitable protective clothing.
Use in well ventilated areas. Use local exhaust ventilation if exposed for long periods. If excessive inhalation in a poorly ventilated area is likely then use a respirator with filter type A.

9 - Physical and Chemical Properties

| | |
|---------------------------------------|--|
| Appearance | : Opaque Blue Liquid |
| Odour | : Slightly sweet, characteristic |
| pH | : ~3-5 |
| Boiling point/range | : Not applicable |
| Melting point/range | : Not applicable |
| Flash point | : >100°C |
| Flammability | : Non-Flammable |
| Explosive properties | : Not applicable |
| Oxidising properties | : None |
| Vapour pressure | : ~0.1mmHg at 20°C |
| Relative density | : ~1.04 |
| Solubility in water | : Virtually insoluble |
| Solubility in solvents | : Miscible in organic solvents, e.g. acetone |
| Vapour density | : Not established |
| Partition coefficient, log Pow | : Not established (but likely to be >3) |
| Viscosity | : ~14,000cPs |
| Evaporation rate (Bu Ac = 1) | : Not established |

10 - Stability and Reactivity

Conditions to avoid: Stable at normal temperatures.
Elevated temperatures, direct sunlight, sources of ignition, low oxygen environments. Hazardous exothermic polymerisation can occur if exposed to elevated temperatures for periods of time. Air space/oxygen above the product is vital to keep formulatory inhibitors active.

Materials to avoid: Oxidising agents, free-radical initiators, reducing metal oxides. Do not allow to contact or store in aluminium, mild steel, rusty steel, copper (or alloys of) or tin vessels.

Hazardous decomposition products: Combustion/exothermic polymerisation will generate oxides of carbon, acrid smoke and irritating fumes.



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11 - Toxicological Information

| | | |
|--------------------------------|----------------------------|---|
| Acute toxicity: | <u>Oral</u> – | Expected to be very low - LD50 (rat) is likely to be in the range 5,000 - 10,000mg/kg |
| | <u>Inhalation</u> – | Expected to be low. LC50 (rat) >4.6mg/l/4h. |
| | <u>Skin</u> – | Expected to be low – LD50 (rabbit) estimated to be >3,000mg/kg |
| Corrosivity/irritation: | <u>Eyes</u> – | Causes irritation. Conjunctival irritation and temporary corneal injury possible. Profuse eye watering. |
| | <u>Skin</u> – | Some irritation and redness at site of contact. Prolonged or repeated contact may lead to dermatitis. |
| | <u>Respiratory Tract</u> – | Mild irritation of nose and throat. |
| Sensitisation: | | Skin sensitisation possible. |
| Repeated-dose toxicity: | | Not tested, but not expected. |
| Mutagenicity: | | Not tested, but not expected. |
| Carcinogenicity: | | Not tested, but not expected. |
| Reproductive Toxicity: | | Not tested, but not expected. |

12 - Ecological Information

Not classified as Dangerous for the Environment by the Conventional Method as detailed in Schedule 3, Parts I and III of CHIP3 Regulations.

| | |
|-----------------------------------|---|
| Ecotoxicity: | Considered to be low – LC50 (96h) fish >1.000mg/l. No-observed effect on bacteria at 30g/l concentration, which is the soluble amount. |
| Bioaccumulative potential: | Expected to be low – testing of one major (non-declarable) component gave a half value time result of ~56 hours (fish) |
| Persistence: | Considered to be biodegradable – testing of one major (non-declarable) component gave a biodegradability result of 85% after 28 days. |
| Mobility: | Considered to be low due to low water solubility. |

13 -Disposal Considerations

Do not discharge into drains or watercourses.
Dispose of product through properly licensed contractors under national and local legislation.

14 -Transport Information

| | | | |
|------------------------|-------------------------------------|-----------------------|---|
| UN No: | None | Packing Group: | - |
| IMDG: | None | Packing Group: | - |
| IATA/ICAO: | None | Item: | - |
| ADR/RID: | None | Flash Point: | - |
| Transport Name: | None – not hazardous for transport. | | |

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15 - Regulatory Information

Symbol(s) & Indication(s) of Danger



Label Phrases Contains 2-hydroxypropyl methacrylate

Risk & Safety Phrases

R36/37/38 Irritating to eyes, skin and respiratory system
R43 May cause sensitisation by skin contact
S24/25 Avoid contact with skin and eyes.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37 Wear suitable gloves.

16 - Other Information

Risk phrases referred to in section 2:-

R7 May cause fire
R10 Flammable
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed
R23/24/25 Toxic by inhalation, in contact with skin and if swallowed
R33 Danger of cumulative effects
R34 Causes burns
R35 Causes severe burns
R36/37/38 Irritating to eyes, respiratory system and skin
R40 Limited evidence of a carcinogenic effect
R43 May cause sensitisation by skin contact
R48/20/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
R50 Very toxic to aquatic organisms
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65 Harmful: may cause lung damage if swallowed.

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Authorized Agent:

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