



HUGH CRANE

— Cleaning Equipment Limited —

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SDS Revision Date: 10/10/2015

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SAFETY DATA SHEET

MB111 PREMIUM GRADE VIRGIN MIXED BED RESIN

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Name: MB111 PREMIUM GRADE VIRGIN MIXED BED RESIN
Product Code: DIB25 (also available - DIB61; DIB64; DIB84; DIP25)
Supplier: Hugh Crane (Cleaning Equipment) Ltd
South Walsham Road, Acle,
Norwich NR13 3ES.
Telephone: (01493) 750072 **Fax** (01493) 751854
SDS Information: No requirement for SDS - This product is not classified as hazardous so no obligation exists to create a Safety Data Sheet according to REACH Art.31 Par.1. This product information is created in a format according to REACH Annex II to fulfil the information obligation according to REACH Art.31 Par.3, Art.32 and Art.33 also for products where no Safety Data Sheet is required on delivery.

Relevant identified uses of the substance or mixture and uses advised against

Function: Ion exchange
Product group: Cleaning agents
Use of the substance/preparation: Demineralization
Uses advised against: No specific uses advised against are identified.
The chemical can be used by the general public: Yes

2. HAZARDS IDENTIFICATION

Classification of substance or mixture: Classification notes CLP Acc. to the criteria of the Regulation (EC) No. 1272/2008 (CLP) not classified as hazardous.

Label elements

Precautionary statements: P102 Keep out of reach of children.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Premium Grade Virgin Mixed Bed Resin UG (EU / EN) Page 1 of 7
P337 + P313 If eye irritation persists: Get medical advice/attention.

Other hazards

Physico-chemical effects: Spilled resin is a slipping hazard.
Health effect: Resin can cause eye and skin irritation, avoid eye and skin contact.
Environmental effects: Cf. section 12 for information on ecology.
Symptoms and effects of potential misuse: No information required.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Mixtures

Substance	Identification	Classification	Contents
Cation exchange resin (EU)	CAS no.: 69011-18-3. Synonyms: Ethylethenylbenzene, ethenylbenzene, ethenylbenzene polymer, methanaminium N,N,N-trimethyl hydroxide. IUPAC name: Benzene, diethyl-, polymer with ethenylbenzene and ethenylethylbenzene, chloromethylated, trimethylaminequaternized, hydroxide	Eye Irrit. 2; H319	60 % wt/wt
Anion exchange resin (EU)	CAS no.: 69011-20-7. Synonyms: Ethylbenzene, Ethylethenylbenzene, ethenylbenzene polymer, sulfonated. IUPAC name: Benzene, diethyl-, polymer with ethenylbenzene and ethenylethylbenzene, sulfonated	Skin Irrit. 2; H315 Eye Irrit. 2; H319	40 % wt/wt

4. FIRST AID MEASURES

General: Place unconscious person on the side in the recovery position and ensure breathing can take place. If medical advice is needed, have product container or label at hand.
Inhalation: Due to the physical form the risk of inhalation is minimal. IF INHALED: Move into fresh air and keep at rest.
Skin contact: Wash skin with soap and water.
Eye contact: Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Seek medical attention and bring along these instructions.
Ingestion: Immediately rinse mouth and drink plenty of water (200-300 ml). Never give liquid to an unconscious person. DO NOT INDUCE VOMITING! If medical advice is needed, have product container or label at hand.

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects Cf. section 11.1 - information on toxicological effects.

Indication of any immediate medical attention and special treatment needed

Specific details on antidotes Decontamination, symptomatic treatment. No special antidote known.



5. FIRE FIGHTING MEASURES

Extinguishing media: Suitable extinguishing media Product doesn't ignite. Use fire-extinguishing media appropriate for surrounding materials. Improper extinguishing media Water jet.

Special hazards arising from the substance or mixture

Fire and explosion hazards: This product is not flammable.

Hazardous combustion products: Carbon dioxide (CO₂). Carbon monoxide (CO). Hydrocarbons. Organic decomposition products. Sulfur dioxide (SO₂). Sulfur trioxide (SO₃).

Advice for firefighters: Personal protective equipment In case of inadequate ventilation wear respiratory protection. Use personal protective equipment as required.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

General Measures: Avoid dust formation. Avoid contact with eyes and skin.

Personal Protection Measures: Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area.

Hazardous Combustion Products: Cf. section 5

For Emergency Responders: In case of inadequate ventilation wear respiratory protection. Use personal protective equipment as required.

Environmental precautions

Environmental precautionary measures: Avoid discharge into drains, water courses or onto the ground.

Methods and material for containment and cleaning up

Cleaning method: Sweep up or pickup with an industrial vacuum cleaner, store in closed container for disposal.

Reference to other sections

Other instructions: Cf. section 8 for personal protection, and section 13 for waste disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling: Observe good chemical hygiene practices. Avoid contact with eyes and prolonged skin contact. Avoid eating, drinking and smoking when using the product.

Conditions for safe storage, including any incompatibilities

Storage: Store at moderate temperatures in dry, well ventilated area.

Conditions for Safe Storage

Req'mts for Storage Rooms and Vessels: Storage in gateways, passages, stairways, hallways open to public, roofs, attics, cellars and workrooms is not advisable

Advice on storage compatibility No incompatibilities known.

Specific end use(s): Recommendations Cf. section 1.2

8. EXPOSURE CONTROLS

Control parameters

DNEL / PNEC

Recommended monitoring NIOSH 0500: Total particulates not otherwise regulated.

Procedures: OSHA PV2121: Gravimetric determination.

Exposure controls

Precautionary measures to prevent exposure

Organisational measures to Prevent exposure: Thoroughly clean hands, forearms, and face after handling of the product, before eating, drinking and lavatory use, and at the end of the work shift.

Technical measures to prevent Exposure:

Respiratory protection: Use engineering controls to reduce air contamination to permissible exposure level.

Under normal conditions of use respiratory protection should not be required. In case of # inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with # particle filter (type P2).

For prolonged or repeated skin contact use suitable protective gloves.

Hand protection: Wear approved chemical safety goggles where eye exposure is reasonably probable.

Eye / face protection: Generally regular work clothing sufficient.

Skin protection (except hands): No specific hygiene procedures noted, but good personal hygiene practices are always

Hygiene / Environmental: advisable. When using do not eat, drink or smoke. Wash at the end of each work shift and before eating, smoking and using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state: Spherical particles 0,2-0,4 mm. Solid.

Colour: Amber.

Odour: Almost odourless.

Comments, pH (as supplied): No data recorded.

pH (aqueous solution): Value: 6-8



Method of testing: aqueous suspension
Comments, Melting point / melting range: No data recorded.
Comments, Boiling point / boiling range: No data recorded.
Flash point Value: > 230 °C
Comments, Flash point: Dry product beginning to inflame
Comments, Evaporation rate: No data recorded.
Flammability (solid, gas): No data recorded.
Comments, Vapour pressure: No data recorded.
Comments, Vapour density: No data recorded.
Specific gravity Value: 1,2 g/cm³
Test temperature: 20 °C
Solubility in water: Unlimited miscible
Spontaneous combustibility Value: > 500 °C
Comments, Decomposition temperature: No data recorded.
Comments, Viscosity: No data recorded.
Explosive properties: Not explosive
Oxidising properties: Not oxidizing

Other information

Softening point Comments: No data available

Content Of Voc Comments: No data available

Physical hazards

Comments, Particle size: No data recorded.

10. STABILITY AND REACTIVITY

Reactivity: Reactivity Stable in normal conditions.

Chemical stability: Stability Stable under normal temperature conditions and recommended use.

Possibility of hazardous reactions: Possibility of hazardous reactions No hazardous reactions under regular storage and handling conditions known.

Conditions to avoid: Conditions to avoid Heating.

Incompatible materials: Materials to avoid Strong oxidising substances.

Hazardous decomposition products: Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Carbon monoxide (CO). Carbon dioxide (CO₂). Nitrous gases (NO_x). Sulphurous gases (SO_x). Organic decomposition products.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Potential acute effects

Inhalation: No specific health warnings noted.

Skin contact: No specific health warnings noted. Prolonged contact may cause redness and irritation.

Eye contact: No specific health warnings noted. Prolonged contact may cause redness and/or tearing.

Ingestion: No specific health warnings noted. The product causes irritation of mucous membranes and may cause abdominal discomfort if swallowed. Ingestion may cause irritation of the gastrointestinal tract, vomiting and diarrhoea.

Aspiration hazard: Depending on the product's properties - solid spherical particles of 0.2-0.4mm - aspiration is technically not feasible.

Delayed effects / repeated exposure

Sensitisation: No specific health warnings noted.

STOT-single exposure: No data available, probably no sub-chronic toxicity

STOT-repeated exposure: No data available, probably no chronic toxicity

Carcinogenic, Mutagenic or Reprotoxic

Carcinogenicity: No specific health warnings noted.

Mutagenicity: No specific health warnings noted.

Teratogenic properties: No specific health warnings noted.

Reproductive toxicity: No specific health warnings noted.

12. ECOLOGICAL INFORMATION

Toxicity:

Persistence and degradability: Persistence and degradability The product is not biodegradable.

Bioaccumulative potential: Bioaccumulative potential The product is not bioaccumulating.

Mobility in soil: Mobility Not relevant, due to the form of the product.

Results of PBT and vPvB assessment: PBT assessment results This product does not contain any PBT or vPvB substances.

Other adverse effects

Comments, Ozone depletion Potential: Ozone depletion potential not known

Comments, Photochemical ozone Creation: Ozone formation potential not known

Comments Global warming potential: Global greenhouse effect not known



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13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Specify the appropriate methods Of Disposal: Dispose of waste and residues in accordance with local authority requirements. No specific disposal method required.

Relevant waste regulation: European Waste Inventory according to the Decision 2014/955/EU on the list of waste The List of Wastes (England) (Amendment) Regulations 2005. (SI 2005 No.895).

Product classified as hazardous Waste: No

Packaging classified as hazardous Waste: No

EWC waste code: EWC: 190905 saturated or spent ion exchange resins

14. TRANSPORT INFORMATION

UN number: No recommendation given.

UN proper shipping name: No recommendation given.

Transport hazard class(es): No recommendation given.

Packing group: No recommendation given.

Environmental hazards: No recommendation given.

Special precautions for user: No recommendation given.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: No recommendation given.

Additional information.

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

ADR / RID - Other information: No recommendation given.

ADN - Other information: No recommendation given.

IMDG / ICAO / IATA Other information: No recommendation given.

15. REGULATORY INFORMATION

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

EEC-directive: Regulation (EC) No. 1907/2006 and Regulation (EC) 2015/830
Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures.

References (laws/regulations): Other UK regulations and guidances:
Health and Safety at Work Act 1974.
The Management of Health and Safety at Work regulations 1992.
L5 Control of substances hazardous to Health. The Control of Substances Hazardous to Health Regulations 2002. Approved codes of practice and guidance.
Guidance Note EH40 - Occupational Exposure Limits.
BS EN ISO 10882-1:2001 - health and safety in welding and allied processes - sampling of airborne particles and gases in the operator's breathing zone - part 1: sampling of airborne particles.

Chemical safety assessment

Chemical safety assessment Performed: No

Chemical Safety Assessment: No data recorded.

Exposure scenarios for mixture: No

Exposure Scenario Comments: No recommendation given.

16. OTHER INFORMATION

Revision Date: 10th October 2015.

Supplier's notes: The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.

List of relevant H-phrases H315 Causes skin irritation.

(Section 2 and 3): H319 Causes serious eye irritation.

Training advice: Not relevant.

Recommended restrictions on use: Not relevant.

User notes: In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material, as far as not expressly stated otherwise.

End of Safety Data Sheet



SAFETY DATA SHEET

MB115 TULSION RESIN

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Name: MB115 TULSION RESIN

Product Code: DIB25

Supplier: Hugh Crane (Cleaning Equipment) Ltd

South Walsham Road, Acle,

Norwich NR13 3ES.

Telephone (01493) 750072 Fax (01493) 751854

Emergency Action: In the event of a medical enquiry involving this product please contact your doctor or local hospital accident and emergency department, who may seek advice from the **UK National Poisons Information Service**, where full product details are held.

2. COMPOSITION / INFORMATION ON INGREDIENTS

Mixtures

COMPONENT	CAS	% BY WEIGHT	EXPOSURE GUIDELINES
Mixture of strong acid cation Exchange Resin and Strong base Anion Exchange Resin, Type I		40-45	None established
Water	7732-18-5	55-60	

3. HAZARDS IDENTIFICATION

Potential Health Effects

Skin:

Prolonged or repeated exposure not likely to cause any significant skin irritation. Skin absorption is unlikely due to physical properties.

Eyes:

Solid or dust may cause irritation or corneal injury due to mechanical action.

Inhalation:

Vapours are unlikely due to physical properties. No adverse effects are anticipated from inhalation.

Ingestion:

Single dose oral LD50 has not been determined. Single dose oral toxicity is believed to be very low. No hazardous anticipated from ingestion incidental to industrial exposure.

Physical/Chemical effects:

These effects have not been studied thoroughly.

4. FIRST AID MEASURES

Skin:

Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

Eyes:

Flush eyes thoroughly with water for at least 15 minutes occasionally lifting upper and lower eyelids. Get medical aid from preferably an ophthalmologist.

Inhalation:

If inhaled remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Ingestion:

If swallowed, wash out mouth with water provided the person is conscious. Call a physician.

5. FIRE FIGHTING MEASURES

Flash point: N/A

Auto Ignition temperature: 427°C (800°F)

LEL: N/A

UEL: N/A

Fire Extinguishing Media: Water spray, Carbon dioxide, dry chemical powder or appropriate foam

Basic firefighting procedure: Keep people away. Isolate fire area and deny unnecessary entry. Cool surroundings with water to localize fire zone. Wear MSHA/NIOSH approved, pressure demand self-contained breathing apparatus/equipment.

Unusual fire & explosion hazards: Emits toxic fumes under fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Personnel precautions: Spilled material may cause a slipping hazard. Use appropriate safety equipment as indicated in point 8 Exposure controls /personnel protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways, and/or groundwater. See point No. 12 Ecological information.

7. HANDLING AND STORAGE

Handling precautions: Avoid contact with skin/eyes. Avoid prolonged or repeated exposure. Wash thoroughly after handling.

Storage conditions: Store in a cool enclosed place. Avoid repeated freeze-thaw cycles.



8. EXPOSURE CONTROLS

Eye protection:	Use safety eyeglasses or chemical safety goggles as described by OSHA's eye & face protection regulations 29 CFR 1910.133 or European standard EN166.
Skin & body protection:	Wear appropriate gloves & clean body covering clothing to prevent skin exposure.
Respiratory protection:	No respiratory protection is needed but whenever necessary always use a NIOSH or European standard N149 approved respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Solid
Appearance:	Amber Yellow colour spherical beads
Odour:	Odourless
Boiling Point:	N/A
Melting Point:	N/A
Freezing Point:	N/A
Vapour Density:	N/A
Vapour Pressure at 20°C:	N/A
Solubility in water at 30°C:	Insoluble
Specific gravity (H₂O = 1):	N/A
Evaporation Rate (BA = 1):	N/A
% Volatiles:	55-60

10. STABILITY AND REACTIVITY

Stability/Incompatibility:	Stable under recommended storage conditions. See point 7, Storage Conditions. Product can decompose at elevated temperatures, so avoid temperatures above 220°C/428°F
Materials to avoid:	Avoid contact with strong oxidising agents such as Nitric acid. Before using strong oxidising agents consult sources knowledgeable in handling such materials. The severity of the reaction with oxidising materials can vary from slight degradation to an explosive reaction.
Hazardous decomposition Products:	Hazardous decomposition products depend upon temperature, air supply and the presence of other materials. Hazardous decomposition products may include and not limited to carbon monoxide, carbon dioxide, aromatic compounds, hydrocarbons, organic sulfonates and sulphur dioxides. Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

No data available for this material. The information shown is based on profiles of compositionally similar interests.	
Acute:	No relevant information found
Skin:	Data not available for this material. Acute dermal toxicity value for LD50rabbit > 5000 mg/kg based on data for similar compositions.
Eye:	No relevant information found.
Ingestion:	Data not available for this material. Acute oral toxicity value LD50rat > 5000 mg/kg based on data for similar compositions.

12. ECOLOGICAL INFORMATION

Ecotoxicity & bioaccumulation:	Ecotoxicity is not expected to be acutely toxic, but pellets may mechanically cause adverse effects if ingested by waterfowl or aquatic life. No bio concentration of the polymeric component is expected because of its high molecular weight.
Environmental mobility:	In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment material will sink and remain in the sediment.
Environmental degradability:	Based largely/completely on information for copolymer. Surface photo degradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

13. DISPOSAL CONSIDERATIONS

For used/uncontaminated product, the preferred options include incineration/ landfill etc. Used material which has been contaminated with heavy metals or radioactive metals or toxic substances must be treated as per local state and federal regulations.

THE MANUFACTURER OF MB111 TULSION RESIN HAS NO CONTROL OVER THE MANAGEMENT PRACTISES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN POINT NO. 2 OF THIS MSDS.

14. TRANSPORT INFORMATION

Hazard Label:	Non Hazardous
ADR:	Non Hazardous for road transport
IMDG:	Non Hazardous for sea transport
IATA:	Non Hazardous for air transport



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15. REGULATORY INFORMATION

The information shown below is based on profiles of compositionally similar materials.

Label: – N/A
Hazard Category: – Indication of Danger – Xi – Irritant
Risk Phrase: – 36 (Irritating to eyes)
Safety Phrase: – 26-36 (In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing).

16. OTHER INFORMATION

Revision Date: 17th May 2018.

Other Information: If the material gets dried, while rewetting, resin gets swelled.

Disclaimer: This information relates specifically to the product designated and may not be valid for the product when used in combination with any other materials or products or in a particular process. The information is, to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to review this information, satisfy itself to its suitability and completeness and pass on the information to its employees or customers in accordance with applicable federal, state or local hazard communications requirement. We do not accept responsibility for any loss or damage which may occur from the use of this information.

End of Safety Data Sheet