

MATERIAL SAFETY DATA SHEET

The Robex Group
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SECTION 1. IDENTIFICATION OF SUBSTANCE/ PREPARATION AND COMPANY

MULTI GRIP BASE

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SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterisation: Ingredients	Formulated Epoxy Resin. CAS No.	Hazard Symbols	R-Phrases	Concentration
Bisphenol (Reaction Product) A- (epichlorhydrin) Epoxy Resin (number ave. mol. wt. <700)	25068-38-6	Xi	R36/38-R43	50-57%
C12-C14 aliphatic glycidyl ether	68609-97-2	Xi	R36/38-R43	5-15%

SECTION 3. HAZARDS IDENTIFICATION

Irritating to eyes and skin.
May cause sensitisation by skin contact.

SECTION 4. FIRST AID MEASURES

Immediate treatment

Eye contact: Immediately flush eyes with running water for at least 15 minutes without interruption. Then visit a doctor.
Skin contact: Remove contaminated clothing immediately. Rinse affected skin with copious amounts of water, using a mild cleansing agent. If irritation persists then seek medical attention.
Inhalation: Remove injured person to fresh air. Seek medical attention.
Ingestion: Do not induce vomiting. Drink water in small sips (diluting effect). Seek medical attention.

SECTION 5. FIRE FIGHTING MEASURES

Special hazards: Harmful gases and vapours (as well as Carbon Dioxide and Carbon Monoxide) may be formed.
Protective equipment: Wear self-contained breathing apparatus.
Extinguishing media: Water, dry powder (BC powder) foam, Carbon Dioxide.
Extinguishing agents prohibited: Water jet.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal protection: Avoid skin and eye contact. Provide for sufficient room ventilation.
Environmental precautions: Prevent from entering the sewer system, surface water or soil.
Methods for cleaning:
Larger amounts: Dike spilled product with a liquid absorbing material and pump off.
Smaller amounts: Soak up with liquid absorbing material and dispose of as instructed. (See Section 13).

SECTION 7. HANDLING AND STORAGE

Safe handling advice: Use only in well ventilated areas. Keep container tightly closed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection: Not normally required. Combination filter A/P2 when spraying.
Eye protection: Safety goggles.
Hand protection: Protective gloves, gauntlet type gloves of PVC or rubber.
Skin protection: Plastic or rubber apron. Suitable arm protection if body contact is possible.
Hygienic measures: Apply skin protection cream before handling. Immediately take off all contaminated clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid, paste or grout.
Colour: Colourless or coloured.
Odour: Weak odour.
Safety relevant data. **NB Data applicable to Resin.**
Boiling temperature: > 200°C at: 1013 hPa

Thermal decomposition: > 200°C
Flash point: ca. 130°C. Method: DIN S1758
Vapour pressure: <0.1 hPa, at: 20°C.
Density: 1.13 g/cm³, at:20°C. Method: DIN 515757.
Solubility: Insoluble in/with water, at 20°C.
Viscosity: 800 - 1100 mPa * s, at 25°C.

SECTION 10. STABILITY AND REACTIVITY

Materials to avoid: May react under considerable heat build up with amines and mercaptanes. Also avoid acids.
Hazardous decomposition products: None.

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity (lethal doses):**

DD50 oral, rat:
Dose : 10ml/kg

General information about acute or other toxicities:

Skin/Eye irritation. In animal testing low molecular weight epoxy resins and glycidil ethers have been shown to cause irritation.

Sensitisation. In animal testing low molecular weight epoxy resins and glycidil ethers have been shown to cause sensitisation.

Experience with Human Beings: Low molecular weight epoxy resins have been shown to cause irritation on skin and eyes. Skin sensitisation was also observed.

SECTION 12. ECOLOGICAL INFORMATION

Additional information about ecology: No results from ecotoxicological test are available.

SECTION 13. DISPOSAL CONSIDERATIONS

Packaging: Can be used again after cleaning. Dispose of washing solution in same way as product.
Product: Burn in compliance with operative regulations in a hazardous waste incinerator.

SECTION 14. TRANSPORT INFORMATION

Not a dangerous good within the meaning of national and international transport regulations.

SECTION 15. REGULATORY INFORMATION

Classification according to EEC Directives.

Classification: Labeling according to EC - Directive 88/379/EEC, and amendments and adaptations.

Hazard Labels: Xi Irritant.

R-Phrases: R36/38 Irritating to eyes and skin.
R43 May cause sensitisation by skin contact.

S-Phrases: S26 In case of contact with eyes, wash immediately with plenty of soap and water and seek medical advice.
S28 After contact with skin, wash immediately with plenty of soap and water.
S37/39 Wear suitable gloves and eye/face protection.

Hazardous ingredient: Reaction product: bisphenol A- (epichlorhydrin); Epoxy resin (number average molecular weight <= 700)
C12-14 alipatic glycidil ether.

SECTION 16. OTHER INFORMATION

The information contained in this data sheet is provided in accordance with the requirements of the Chemicals (Hazard Information and Packaging) Regulations. It does not constitute the user's own assessment of workplace risks are required by other health and safety legislation. The provisions of the Health and Safety at Work etc. Act and the Control of Substances Hazardous to Health Regulations apply to the use of this product at work.

The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of the relevant legislation are complied with.

This product should be stored, handled and used in accordance with good industrial hygiene practices and in conformity with legal regulations. The information contained herein is based on the current state of our knowledge and is intended to describe products from the point of view of safety requirements and thus should not be construed as guaranteeing specific properties.

Date of Preparation: 01.02.2003



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MATERIAL SAFETY DATA SHEET

SECTION 1. IDENTIFICATION OF SUBSTANCE/ PREPARATION AND COMPANY

MULTI GRIP REACTOR

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SECTION 2.

Chemical characterisation:
Ingredients

COMPOSITION/INFORMATION ON INGREDIENTS

CAS No.	Hazard Symbols	R-Phrases	Concentration
100-51-6		R20/22	<50%
2855-13-2		R34/21/22/43	< 50%

SECTION 3.

Caution:

HAZARDS IDENTIFICATION

Contains Polymeric Polyamine and Benzyl Alcohol.

SECTION 4.

Immediate Treatment:

Eye contact:

Skin contact:

Inhalation:

Ingestion:

FIRST AID MEASURES

Rinse immediately with plenty of water, continuing for 15 minutes and seek medical attention.
Wash immediately with plenty of water and soap. Remove contaminated clothing. In case of persistent irritation or if rash develops, seek medical attention.
Remove the affected person to fresh air, and allow to rest. In case of breathing difficulty or distress, seek medical attention.
Immediately rinse mouth with water and seek medical attention if this is not immediately available, drink one or two pints of water.

SECTION 5.

Special hazards:

Protective equipment:

Extinguishing agents:

FIRE FIGHTING MEASURES

Cool containers in the vicinity of the blaze with water spray. May generate toxic, irritating or flammable products. Sudden reaction and fire may result if mixed with an oxidising agent.
Wear self-contained breathing apparatus, butyl boots and a body suit.
Use foam, dry chemical, CO2 or water spray. Retain liquids used for later disposal. **Class B Fire.**

SECTION 6.

Personal protection:

Environmental precautions:

Methods for cleaning:

Additional information:

ACCIDENTAL RELEASE MEASURES

Use PPE described above.
Wash the area clean with water and detergents.
Absorb with earth, sand or other absorbent material, sweep up and shovel into containers for disposal.
Extinguish naked lights in the vicinity.

SECTION 7.

Safe handling advice:

Storage:

HANDLING AND STORAGE

Wear goggles or a face shield, impervious gloves and protective clothing.
Use in a well ventilated area.
Store in a cool well ventilated place away from foodstuffs and epoxy resins.

SECTION 8.

Respiratory protection:

Eye protection:

Hand protection:

Skin protection:

EXPOSURE CONTROLS/PERSONAL PROTECTION

In poorly ventilated areas use a cartridge mask approved for organic vapours.
Goggles/face shield.
Impervious gloves.
Slicker suit. Rubber boots.

SECTION 9.

Physical state:

Colour:

Odour:

Safety Relevant Data.

Boiling temperature:

Melting point:

Flash point:

Solubility:

Viscosity:

Relative density:

PHYSICAL AND CHEMICAL PROPERTIES

Liquid.
Clear to yellow.
Irritating.
224°C.
< -18°C.
166°C. (closed cup).
Low in water. Miscible with hydrocarbon solvents.
100 (cps) @ 25°C.
1.00 @ 25°C.

SECTION 10.

STABILITY AND REACTIVITY

Materials to avoid: Oxidising agents (i.e. perchlorates, nitrates etc.). Cleaning solutions such as chromerge and aqua regia.
Hazardous decomposition products: CO in a fire, CO2 in a fire. Ammonia when heated, Nitrogen Oxides in a fire. Nitrogen Oxide can react with water vapours to form corrosive nitric acid.
Combustion of product under oxygen starved conditions can be expected to produce numerous toxic products i.e. nitrides/amines.

SECTION 11.

TOXICOLOGICAL INFORMATION

General information about acute or other toxicity's: Oral LD50 (rat) : 1373 mg/kg
Dermal LD50 (rabbit) : >2000 mg/kg

SECTION 12.

ECOLOGICAL INFORMATION

Additional information about ecology: No results from ecotoxicological test are available.

SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local and national regulations. For example, in the UK regulations made under the Control of Pollution Act 1974, and the Environmental Protection Act 1990. Wear protective clothing during disposal operations. If disposal is by a waste container, make sure that he has sufficient information and that waste containers are properly labeled.

SECTION 14. TRANSPORT INFORMATION

UN No.: 2735
ADR/RID shipping data: Isophoronediamine Mixture 8.53 (c)
IMO shipping data: Alkylamines, liquid, NOS (Isophoronediamine); 8; UN2735; IMDG Pg.: 8103, pa, iii
ICAO/IATA shipping data: As 'IMO'.

SECTION 15. REGULATORY INFORMATION

Classification according to EEC Directives.
Classification: Corrosive, causes burns.
Hazard labels:
R-Phrases: R34/20/21/22/43
S-Phrases: S26/36/37/39

SECTION 16. OTHER INFORMATION

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Date of Preparation: 01.02.2003



MATERIAL SAFETY DATA SHEET

SECTION 1. IDENTIFICATION OF SUBSTANCE/ PREPARATION AND COMPANY

MULTI GRIP BAUXITE AGGREGATE

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SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

Substantially corundum produced from the mineral bauxite by very high temperature calcination. Principally composed of compounds of aluminium, silicon and titanium.

SECTION 3. HAZARDS IDENTIFICATION

This product contains a very small proportion of crystalline silica (quartz) typically <2% by weight. Inhalation of finely divided quartz over a prolonged period of time can result in damage to lung tissue and impaired pulmonary function. Excessive inhalation of any product dust (some of the grades may contain dust in the respirable fraction) may give rise to temporary irritation of the respiratory tract.

SECTION 4. FIRST AID MEASURES

Oral: Low oral toxicity, but avoid ingestion.
Give plenty of water to drink and seek medical advice.
Eye: The product is not a primary irritant but eye contact may cause irritation.
Wash with copious stream of clean water for 15 minutes and seek medical attention.
Skin: The coarser grades in particular may abrade the skin.
Wash with soap and water, if any adverse reaction occurs obtain medical advice.
Inhalation: Excessive inhalation of any product dust may give rise to temporary irritation of the respiratory tract. If affected remove to fresh air. If ill effects persist obtain medical advice.

SECTION 5. FIRE FIGHTING MEASURES

The product is not combustible or explosive.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions: See Section 8. Exposure controls/personal protection.

Spillages: Spillages should be collected by wet sweeping or by use of a vacuum cleaner fitted with a high efficiency particulate filter.

SECTION 7. HANDLING AND STORAGE

Handling: The use of engineering measures (e.g local dust extraction) are recommended to provide effective dust control in order to ensure compliance with the current * Occupational Exposure Limits. For example see M.E.L for respirable crystalline silica O.E.L. for 'dusts'.

Storage: Store under normal dry conditions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Also see Section 7. Handling.

Wear protective clothing e.g. overall and cap, and if prolonged contact with the hands is likely, suitable impervious gloves. When engineering control measures (e.g. local dust extraction) need to be supplemented by the wearing of respiratory protective device this must be of a type or to a standard approved by the Health & Safety Executive. If conditions exist where product contact with the eyes is likely, goggles meeting the requirements of BS2092 should worn.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Colour: Grey.
Odour: Odourless.
Solubility in water: Negligible.
Particle size: The calcined bauxite covered by this data can range from typically 10mm - dust.

SECTION 10. STABILITY AND REACTIVITY

The material is considered to be stable and relatively inert.

SECTION 11. TOXICOLOGICAL INFORMATION

The most hazardous component contained in this product is crystalline silica. However, there is only a very small proportion present. This product should not present a significant hazard to health provide that the standards of industrial hygiene outlined in this data sheet are followed.

SECTION 12. ECOLOGICAL INFORMATION

No specific test data available.
However, this product is essentially insoluble in water.

SECTION 13. DISPOSAL CONSIDERATIONS

As required by Local Regulations (e.g. by land-fill) at an approved site. In the U.K. the disposal of waste should be in accordance with the Control of Pollution Act 1974. Environmental Protection Act 1990.

SECTION 14. TRANSPORT INFORMATION

No special precautions are required. This product is not classified as dangerous for conveyance.

SECTION 15. REGULATORY INFORMATION

This product is not required to carry a hazard warning label under the Chemicals (Hazard Information and Packaging) Regulations (CHIP2) 1994.

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In the UK the following Guidance notes/Legislation provide useful information:

Guidance Not EH40 Occupational Exposure Limits is currently published annually by the Health and Safety Executive. The latest relevant limits should be observed.

HS (G) 37 'An Introduction to Local Exhaust Ventilation' and Guidance Note EH44 'Dust in the Workplace : general principals of protection'. These provide useful guidance on the control of dust, both are available from HM Stationery office.

Guidance Booklet HS (G) 53: Respiratory Protective Equipment - A Practical Guide for Users.

Personal Protective Equipment at Work Regulations, S.I. 1992, No. 2966.

BS2092: Specifications for industrial eye protectors, (to be replaced by BS EN 166 167, 168).

Control of Substances Hazardous to Health Regulations 1988 S.I. 1988 No 1657.

Chemical (Hazard Information and Packaging) Regulations (CHIP2) 1994.

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