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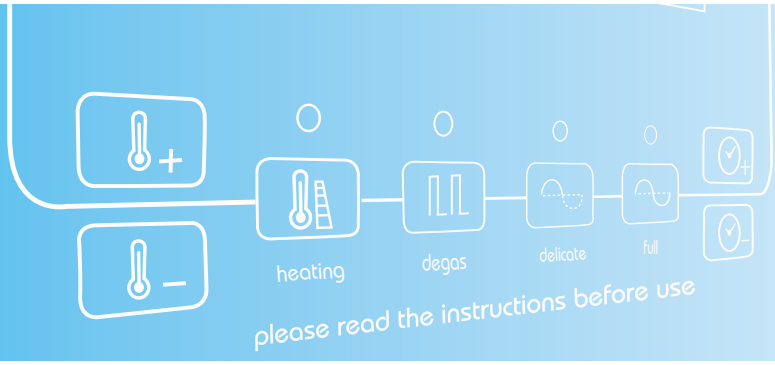
Suppliers of Ultrasonic Cleaners and Solutions

Power Maxed Steel Power Epoxy / Activator Tube Safety Data Sheet



V1.0

Power Maxed Steel Power Epoxy / Activator Tube

Part No: US-SP-EP-56G
Doc V: 1.0

POWER MAXED Steel Power Epoxy is a slow-curing, strong adhesive with exceptional adhesion to most hard materials, especially metals. Suitable for use as an adhesive for metal, ceramics, brick, plaster and fibre glass, Steel Power Epoxy is ideal for anything from DIY household repairs to a range of more industrial uses.

- Perfect for bonding Ultrasonic transducers to most surfaces.
- Repairs Ceramics, Brick, Plaster, Wood and Fibre glass.
- Fills Metal Castings and Automotive Parts.
- Bonding Models and Test Rigs.
- Application Temperature: +5°C - +35°C.
- Store Out Of Direct Sunlight At Temperatures Between 15°C and 25°C.
- Colour in Epoxy tube: Grey.
- Colour in Activator tube: Black.

Directions for use

CLEAN: Clean, dry and abrade the joint surfaces to be adhered.

MIX: Measure equal amounts from each tube and mix until uniform.

APPLY: Apply the mixture to one surface and press parts together.

For more information please contact us.

Contents

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Health and Safety Data (Epoxy - Red Tube)

PRODUCT IDENTIFICATION	PRODUCT NAME:	Power Maxed Steel Power Epoxy Tube
	PRODUCT CODE:	US-SP-EP-56G
	PRODUCT TYPE:	EPOXY
	SUPPLIER:	ALLENDALE ULTRASONICS PINDAR ROAD, HODDESDON, EN11 0BZ. Tel: 01992 455925
	WEBSITE:	www.allendale-ultrasonics.co.uk
	DATE ISSUED:	07-03-2018
HAZARDS IDENTIFICATION	CLASSIFICATION UNDER CLP:	Aquatic Chronic 2: H411; Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317
	MOST IMPORTANT ADVERSE EFFECTS:	Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Toxic to aquatic life with long lasting effects.
	SYMBOLS:	 GHS07: Exclamation mark. GHS09: Environmental.
	SIGNAL WORD:	Warning.
	HAZARD-RISK STATEMENT:	H315: Causes skin irritation. H317: May cause an allergic skin reaction. H319: Causes serious eye irritation. H411: Toxic to aquatic life with long lasting effects.
	PRECAUTIONARY STATEMENT:	P261: Avoid breathing dust/fumes/gas/mist/vapours/spray. P264: Wash hands thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/ face protection. P302+352: IF ON SKIN: Wash with plenty of water/. P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P321: Specific treatment (see instructions on this label).
	CONTAINS:	EPOXY RESIN (Number average MW <= 700).

COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	EINECS No.	Conc. (%w/w)	Classification
BISPHENOL A-(EPICHLORHYDRIN){REACTION PRODUCT}- REACH registered number(s): 01-2119456619-26	25068-38-6	500-033-5	50 – 100 %	Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317; Aquatic Chronic 2: H411
FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROANE AND PHENOL -REACH registered number(s): 01-2119454392-40	9003-36-5	500-006-8	1 – 10 %	Aquatic Chronic 2: H411; Skin Irrit. 2: H315; Skin Sens. 1: H317
Bisphenol A epoxy - adduct	0068610-41-3	Polymer	1 – 10 %	Aquatic Chronic 2 H411

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FIRST AID MEASURES	DESCRIPTIONS OF FIRST AID	
	SKIN CONTACT:	Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash immediately with plenty of soap and water.
	EYE CONTACT:	Bathe the eye with running water for 15 minutes. Consult a doctor.
	INGESTION:	Wash out mouth with water. Consult a doctor.
	INHALATION:	Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.
FIRE-FIGHTING MEASURES	EXTINGUISHING MEDIA:	Suitable extinguishing media for the surrounding fire should be used.
	SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:	In combustion emits toxic fumes.
	ADVICE FOR FIRE-FIGHTERS:	Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.
ACCIDENTAL RELEASE MEASURES	PERSONAL PRECAUTIONS:	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 unauthorised personnel. Do not create dust.
	ENVIRONMENTAL PRECAUTIONS:	Do not discharge into drains or rivers.
	METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:	Transfer to a closable, labelled salvage container for disposal by an appropriate method.
HANDLING AND STORAGE	PRECAUTIONS FOR SAFE HANDLING:	Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of dust in the air.
	CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:	Store in a cool, well ventilated area. Keep container tightly closed. The floor of the storage room must be impermeable to prevent the escape of liquids.

EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters	
Appropriate engineering controls	Ensure there is sufficient ventilation of the area. The floor of the storage room must be impermeable to prevent the escape of liquids.
Eye / face protection	Safety glasses. Ensure eye bath is to hand.
Skin protection – Hand protection	Protective gloves.
Respiratory protection	Self-contained breathing apparatus must be available in case of emergency. Respiratory protective device with particle filter.

PHYSICAL AND CHEMICAL PROPERTIES	STATE:	Paste
	COLOUR:	Grey
	ODOUR:	Barely perceptible odour
	BOILING POINT:	No data available.
	RELATIVE DENSITY:	1.55 - 1.65.
	VISCOSITY:	Highly viscous.
	FLASH POINT:	No data available.

STABILITY AND REACTIVITY	REACTIVITY:	Stable under normal conditions.
	CHEMICAL STABILITY:	Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.
	POSSIBILITY OF HAZARDOUS REACTIONS:	Heat.
	CONDITIONS TO AVOID:	Strong oxidising agents. Strong acids.

TOXICOLOGICAL INFORMATION

BISPHENOL A-(EPICHLORHYDRIN) {REACTION PRODUCT}:

ORL	MUS	LD50	15600	mg/kg
ORL	RAT	LD50	11400	mg/kg
SKN	RBT	LD50	>20	ml/kg

FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROANE AND PHENOL:

ORAL	RAT	LD50	>2000	mg/l

FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROANE AND PHENOL:

ORAL	RAT	LD50	>2000	mg/kg

RELEVANT HAZARDS FOR SUBSTANCE:

HAZARD	ROUTE	BASIS
Skin corrosion / irritation	DRM	Hazardous: Calculated
Serious eye damage / irritation	OPT	Hazardous: Calculated
Respiratory / skin sensitisation	DRM	Hazardous: Calculated

ECOLOGICAL INFORMATION

HAZARDOUS INGREDIENTS:

FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROANE AND PHENOL:

Daphnia magna	96H LC50	> 100	mg/l

PERSISTENCE AND DEGRADABILITY: Not biodegradable.

BIOACCUMULATIVE POTENTIAL: Bioaccumulation potential.

PBT IDENTIFICATION: This product is not identified as a PBT/vPvB substance. Other adverse effects: Toxic to aquatic organisms. Toxic to soil organisms.

DISPOSAL CONSIDERATIONS	DISPOSAL OPERATIONS:	Transfer to a suitable container and arrange for collection by specialised disposal company.
	NB:	The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.
TRANSPORT INFORMATION	HAZARD PICTOGRAMS:	
	UN NUMBER:	UN3082
	SHIPPING NAME:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin).
	TRANSPORT HAZARD CLASS(ES):	
	ADR/RID:	9
	IMDG SUBSIDIARY RISK:	9
	IATA SUBSIDIARY RISK:	9
	PACKING GROUP:	III
	ENVIRONMENTAL HAZARDS:	Yes
	MARINE POLLUTANT:	Yes
	TUNNEL CATEGORY:	E

REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
EU legislation.
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Guidance:
Workplace Exposure Limits EH40.
Chemical safety assessment:
No chemical safety assessment has been carried out.

OTHER INFORMATION

Risk (R) phrases in the Composition section:
R36/38 Irritating to eyes and skin.
R43 May cause sensitization by skin contact.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Hazard (H) Statements in the Composition section:
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.
Further information: The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date
of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and
release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may
not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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Health and Safety Data (Activator - Black Tube)

PRODUCT IDENTIFICATION	PRODUCT NAME:	Power Maxed Steel Power Activator Tube
	PRODUCT CODE:	US-SP-EP-56G
	PRODUCT TYPE:	ACTIVATOR
	SUPPLIER:	ALLENDALE ULTRASONICS PINDAR ROAD, HODDESDON, EN11 0BZ. Tel: 01992 455925
	WEBSITE:	www.allendale-ultrasonics.co.uk
	DATE ISSUED:	07-03-2018

HAZARDS IDENTIFICATION	SYMBOLS:	 GHS07: Exclamation mark. GHS09: Environmental. GHS05: Corrosion.
	SIGNAL WORD:	Danger.
	HAZARD-RISK STATEMENT:	Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Very toxic to aquatic life with long lasting effects.
	PRECAUTIONARY STATEMENT:	**Prevention** Wear protective gloves. Wear eye or face protection. Wear protective clothing. Avoid release to the environment. **Response** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER or physician. IF IN EYES: Immediately call a POISON CENTER or physician. **Storage** Store locked up. **Disposal** Dispose of contents and container in accordance with all local, regional, national and international regulations.
	CONTAINS:	Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine benzyl alcohol isophorone diamine Phenol, styrenated m-xylylendiamine 2,4,6-tris(dimethylaminomethyl)phenol bis[(dimethylamino)methyl]phenol 3-aminopropyltriethoxysilane

COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Conc. (%w/w)	Classification
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine.	186321-96-0	10-30	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317
Benzyl alcohol	100-51-6	1-20	Aquatic Acute 1, H400 Aquatic Chronic 1, Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319
3-aminomethyl-3,5, 5-trimethylcyclohexylamine	2855-13-2	1-5	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Phenol, styrenated	61788-44-1	1-5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411 Acute Tox. 4, H302
M-phenylenebis (methylamine)	1477-55-0	3-7	Acute Tox. 4, H302
2,4,6-tris (dimethylaminomethyl) phenol	90-72-2	3-7	Acute Tox. 4, H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412 Acute Tox. 4, H302 Skin Corr. 1C, H314 Eye Dam. 1, H318
bis[(dimethylamino) methyl]phenol	71074-89-0	0.1-1	Skin Sens. 1B, H317 Aquatic Chronic 3, H412 Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Eye Dam. 1, H318

FIRST AID MEASURES

DESCRIPTIONS OF FIRST AID

INHALATION:

Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

EYE CONTACT:	Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
SKIN CONTACT:	Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
INGESTION:	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
PROTECTION OF FIRST AIDERS:	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

<u>MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED</u>

INHALATION:	May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
EYE CONTACT:	Causes serious eye damage.
SKIN CONTACT:	Causes severe burns. May cause an allergic skin reaction.
INGESTION:	Harmful if swallowed. May cause burns to mouth, throat and stomach.

	FIRST AID MEASURES:	
	INHALATION:	No specific data.
	EYE CONTACT:	Adverse symptoms may include the following: pain, watering, redness.
	SKIN CONTACT:	Adverse symptoms may include the following: pain or irritation, redness, blistering may occur.
	INGESTION:	Adverse symptoms may include the following: stomach pains.
	INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:	
	NOTES TO PHYSICIAN:	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	SPECIFIC TREATMENTS:	Symptomatic treatment and supportive therapy as indicated. Following severe exposure the patient should be kept under medical review for at least 48 hours.
FIRE-FIGHTING MEASURES	EXTINGUISHING MEDIA:	Use an extinguishing agent suitable for the surrounding fire.
	SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:	In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	HAZARDOUS THERMAL DECOMPOSITION PRODUCTS:	Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides.
	ADVICE FOR FIREFIGHTERS SPECIAL PRECAUTIONS FOR FIRE-FIGHTERS:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
ACCIDENTAL RELEASE MEASURES	PERSONAL PRECAUTIONS:	**For non-emergency Personnel** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. **For emergency responders** If specialised clothing is required to deal with the spillage, take note of any information in exposure controls / personal protection on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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	ENVIRONMENTAL PRECAUTIONS:	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
	METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:	**Small spill** Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. **Large spill** Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
HANDLING AND STORAGE	PRECAUTIONS FOR SAFE HANDLING:	**Protective measures** Put on appropriate personal protective equipment. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. **Advice on general occupational hygiene** Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also exposure controls / personal protection for additional information on hygiene measures.
	CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:	Storage temperature: 2 to 40°C (35.6 to 104°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

CONTROL PARAMETERS:

OCCUPATIONAL EXPOSURE LIMITS:

Product/ingredient name	Exposure limit values
m-xylylendiamine	SUVA (Switzerland, 6/2013). Absorbed through skin. TWA: 0.1 mg/m³ 8 hours.

RECOMMENDED MONITORING PROCEDURES:

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DERIVED EFFECT LEVELS:

Product/ingredient name	Type	Exposure	Value	Population	Effects
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine	DNEL DNEL DNEL DNEL DNEL	Long term Inhalation Long term Dermal Long term Inhalation Long term Dermal Long term Oral	23.5 mg/m³ 3.33 mg/ kg bw/day 5.8 mg/m³ 1.67 mg/ kg bw/day 1.67 mg/ kg bw/day	Workers Workers Consumers Consumers Consumers	Systemic Systemic Systemic Systemic Systemic
Benzyl alcohol	DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL	Short term Dermal Short term Inhalation Long term Dermal Long term Inhalation Short term Dermal Short term Inhalation Short term Oral Long term Dermal Long term Inhalation Long term Oral	47 mg/kg bw/day 450 mg/m³ 9.5 mg/kg bw/day 90 mg/m³ 28.5 mg/ kg bw/day 40.55 mg/ m³ 25 mg/kg bw/day 5.7 mg/kg bw/day 8.11 mg/m³ 5 mg/kg bw/day	Workers Workers Workers Workers Consumers Consumers Consumers Consumers Consumers Consumers	Systemic Systemic Systemic Systemic Systemic Systemic Systemic Systemic Systemic Systemic
3-aminomethyl-3,5, 5-trimethylcyclohexylamine	DNEL DNEL	Short term Inhalation Short term Inhalation	20.1 20.1	Workers Workers	Systemic Local
2,4,6-tris(dimethylaminomethyl) phenol	DNEL DNEL	Long term Oral Long term Inhalation	0.526 0.31 mg/m³	Consumers Workers	Systemic Systemic

PREDICTED EFFECT CONCENTRATIONS:

Product/ingredient name	Type	Compartment Detail	Value	Population
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine	PNEC PNEC PNEC PNEC PNEC PNEC PNEC	Fresh water Marine PNEC intermittent Sewage Treatment Plant Fresh water sediment Marine water sediment Soil	0.186 µg/l 0.019 µg/l 1.86 µg/l 1.58 mg/l 0.005 mg/kg 0.005 mg/kg 0.00089 mg/kg	Assessment Factors Assessment Factors Assessment Factors Assessment Factors Equilibrium Partitioning Equilibrium Partitioning Equilibrium Partitioning
Benzyl alcohol	PNEC PNEC PNEC PNEC PNEC PNEC PNEC	Fresh water Marine PNEC intermittent Sewage Treatment Plant Fresh water sediment Marine water sediment Soil Secondary Poisoning	1 mg/l 0.1 mg/l 2.3 mg/l 39 mg/l 5.27 mg/kg 0.527 mg/kg 0.456 mg/kg -	Assessment Factors Assessment Factors Assessment Factors Assessment Factors Assessment Factors Assessment Factors Assessment Factors Assessment Factors

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3-aminomethyl-3,5, 5-trimethylcyclohexylamine	PNEC PNEC PNEC PNEC PNEC PNEC PNEC	Fresh water Marine PNEC intermittent Sewage Treatment Plant Fresh water sediment Marine water sediment Soil Secondary Poisoning	0.006 0.23 3.18 5.784 0.578 1.121 - 0.084 mg/l	Assessment Factors Assessment Factors Assessment Factors Assessment Factors Assessment Factors Assessment Factors Assessment Factors Assessment Factors
2,4,6-tris(dimethylaminomethyl) phenol	PNEC PNEC PNEC PNEC	Fresh water Marine PNEC intermittent Sewage Treatment Plant	0.084 mg/l 0.0084 mg/ 0.84 mg/l 0.2 mg/l	Assessment Factors Assessment Factors Assessment Factors Assessment Factors

EXPOSURE CONTROLS	APPROPRIATE ENGINEERING CONTROLS:	If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
	EYE / FACE PROTECTION:	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
	SKIN PROTECTION – HAND PROTECTION:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
	SKIN PROTECTION – MATERIAL OF GLOVES FOR LONG TERM APPLICATION (BTT>480MIN):	Butyl rubber, Ethyl Vinyl Alcohol Laminate (EVAL).
	SKIN PROTECTION – MATERIAL OF GLOVES FOR SHORT TERM/ SPLASH APPLICATION (10MIN<BTT<480MIN):	Nitrile rubber, neoprene Use gloves approved to relevant standards e.g. EN 374 (Europe), F739 (US). Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material and dexterity. Always seek advice from glove suppliers.
	HYGIENE MEASURES:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
	BODY PROTECTION:	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
	OTHER SKIN PROTECTION:	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

	RESPIRATORY PROTECTION:	In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
	ENVIRONMENTAL EXPOSURE CONTROLS:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
PHYSICAL AND CHEMICAL PROPERTIES	STATE:	Viscous liquid.
	COLOUR:	Black.
	ODOUR:	Amine-like.
	BOILING POINT:	No data available.
	RELATIVE DENSITY:	1.5
	VISCOSITY:	Viscous liquid.
	FLASH POINT:	Closed Cup 86°C (estimated).
STABILITY AND REACTIVITY	REACTIVITY:	No specific test data related to reactivity available for this product or its ingredients.
	CHEMICAL STABILITY:	The product is stable.
	POSSIBILITY OF HAZARDOUS REACTIONS:	Under normal conditions of storage and use, hazardous reactions will not occur.
	CONDITIONS TO AVOID:	No specific data.
	INCOMPATIBLE MATERIALS:	Strong acids, strong bases, strong oxidising agents.
	HAZARDOUS DECOMPOSITION PRODUCTS:	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Decomposition products may include the following materials: Carbon oxides, Burning produces obnoxious and toxic fumes., Nitrogen oxides.

TOXICOLOGICAL INFORMATION:

ACUTE TOXICITY ESTIMATES:

Route	ATE value
Dermal	9961.5 mg/kg
Inhalation (dusts and mists)	5.199 mg/l

IRRITATION/CORROSION:

Skin	Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine	Irritating to skin.
	Benzyl alcohol	Non-irritating to the skin.
	3-aminomethyl-3,5, 5-trimethylcyclohexylamine	Corrosive to the skin.
	M-phenylenebis (methylamine)	Corrosive to the skin.
	2,4,6-tris (dimethylaminomethyl) phenol	Corrosive to the skin.
	bis[(dimethylamino) methyl]phenol	Irritating to skin.

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Eyes	Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine	Irritating to eyes
	Benzyl alcohol	Irritating to eyes
	3-aminomethyl-3,5, 5-trimethylcyclohexylamine	Corrosive to eyes.
	2,4,6-tris (dimethylaminomethyl) phenol	Corrosive to eyes.
	bis[(dimethylamino) methyl]phenol	Irritating to eyes

POTENTIAL ACUTE HEALTH EFFECTS:

Inhalation: May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion: Harmful if swallowed. May cause burns to mouth, throat and stomach.
Skin contact: Causes severe burns. May cause an allergic skin reaction.
Eye contact: Causes serious eye damage.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS:

Inhalation: No specific data.
Ingestion: Adverse symptoms may include the following: stomach pains
Skin contact: Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
Eye contact: Adverse symptoms may include the following:
pain
watering
redness

POTENTIAL CHRONIC HEALTH EFFECTS:

General: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.

ECOLOGICAL INFORMATION — TOXICITY: No additional information.

DISPOSAL CONSIDERATIONS:

Dispose of in compliance with all local and national regulations.

TRANSPORT INFORMATION	UN NUMBER:	UN2735
	PROPER SHIPPING NAME:	Amines, liquid, corrosive, n.o.s. (Isophorone diamine , Xylylene diamine)

	Transport Hazard Class(es)	Packing Group	Environmental Hazards	Additional Information
ADR/RID		II	Yes	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. **Hazard identification number** 80 **Special provisions** 274 **Tunnel code** E
IMDG		II	Yes	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. **Emergency schedules (EmS)** F-A S-B
IATA		II	No	The environmentally hazardous substance mark may appear if required by other transportation regulations. **Passenger and Cargo Aircraft** Quantity limitation: 1 L Packaging instructions: 851 **Cargo Aircraft Only** Quantity limitation: 30 L Packaging instructions: 855

REGULATORY INFORMATION

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

EU legislation

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Guidance

Workplace Exposure Limits EH40.

Substances of very high concern

None of the components are listed.

Chemical safety assessment

No chemical safety assessment has been carried out.

OTHER INFORMATION

H302 Harmful if swallowed.
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.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
Acute Tox. 4, H302 ACUTE TOXICITY (oral) - Category 4
Acute Tox. 4, H312 ACUTE TOXICITY (dermal) - Category 4
Acute Tox. 4, H332 ACUTE TOXICITY (inhalation) - Category 4
Aquatic Acute 1, H400 ACUTE AQUATIC HAZARD - Category 1
Aquatic Chronic 1, H410 LONG-TERM AQUATIC HAZARD - Category 1
Aquatic Chronic 2, H411 LONG-TERM AQUATIC HAZARD - Category 2
Aquatic Chronic 3, H412 LONG-TERM AQUATIC HAZARD - Category 3
Eye Dam. 1, H318 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Skin Corr. 1B, H314 SKIN CORROSION/IRRITATION - Category 1B
Skin Corr. 1C, H314 SKIN CORROSION/IRRITATION - Category 1C
Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1, H317 SKIN SENSITIZATION - Category 1
Skin Sens. 1B, H317 SKIN SENSITIZATION - Category 1B
R22- Harmful if swallowed.
R20/22- Harmful by inhalation and if swallowed.
R21/22- Harmful in contact with skin and if swallowed.
R34- Causes burns.
R41- Risk of serious damage to eyes.
R38- Irritating to skin.
R36/38- Irritating to eyes and skin.
R43- May cause sensitisation by skin contact.
R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
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.

Further information: The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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