TS72 Part B Hardener

Issued: 08/10/2019, Revision No: 3
Regulation (EC) No. 453/2010

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

1.1 Product Identifier

Material name: TS72 Part B Hardener

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

Product use: Component of epoxy coating

1.3 Details of the supplier of the safety data sheet

Manufacturer / Supplier: IMG Ltd.,
Unit M
Riverside Industrial Estate
Fazeley
Tamworth
B78 3RW

Telephone: 01827 283322

Fax: 01827 250143

Email (for SDS): sales@img-limited.co.uk

1.4 Emergency tel. no: 01827 283322 (Available from 8.30 – 17.00 hours)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

According to 1272/2008/EC: Classification, Labelling and Packaging of Substances and Mixtures (CLP) Regulation:

Physical and Chemical hazards	Not classified
Human Health	Acute Tox.4; H 302; Skin Corr.1B; H314; Eye Dam.1; H318; Skin Sens.1; H317; Repr.1B; H360F (Fertility)
Environment	Aquatic Chronic 3; H412

2.2 Label elements

Label according to EC Directives: 1272/2008/EC:

Signal word: Danger

Pictogram(s):

Contains: Isophorone Diamine, 1,3-Benzenedimethanamine, 4,4'-Isopropylidenediphenol

Hazard Statements:	H302	Harmful if swallowed.
	H314	Causes severe skin burns and eye damage.
	H317	May cause an allergic skin reaction.
	H360F	May damage fertility.

	H412	Harmful to aquatic life with long lasting effects.
Precautionary	P201	Obtain special instructions before use.
Statements:	P280	Wear protective gloves/eye protection/ face protection.
	P273	Avoid release to the environment.
	P304+P340+P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician.
	P301+P310+P331	IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
	P303+P361+P353+P310	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or physician.
	P305+P310	IF IN EYES: Immediately call a POISON CENTER or physician.
	P405	Store locked up.
	P501	Dispose of contents/container to requirements of local authorities.

Other hazards: This mixture does not contain any substances that are assessed to be PBT or a vPvB.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures:

Hazardous components:

Chemical Name	CAS.No/ EC No./ Reg.No	Classification (1272/2008/EC)	Content
Isophorone Diamine	EC: 220-666-8 CAS: 2855-13-2 INDEX: 612-067-00-9	Acute Tox.4; H302 Acute Tox.4; H312 Skin Corr.1B; H314 Eye Dam.1; H318 Skin Sens.1; H317 Aquatic Chronic 3; H412	≥25-≤50%
Phenylmethanol	EC: 202-859-9 CAS: 100-51-6 INDEX: 603-057-00-5 REACH: 01-2119492630-38	Acute Tox.4; H302 Acute Tox.4; H332	≥25-≤50%
1,3-Benzenedimethanamine	CAS: 1477-55-0 EC: 216-032-5	Acute Tox.4; H302 Acute Tox.4; H332 Skin Corr.1B; H314 Eye Dam.1; H318 Skin Sens.1; H317 Aquatic Chronic 3; H412	≤10%
4,4'-Isopropylidenediphenol	CAS: 80-05-7 EC: 201-245-8 REACH: 01-2119457856-23 INDEX: 604-030-00-0	Eye Dam.1; H318 Skin Sens.1; H317 Repr.1B; H360F (Fertility) STOT SE 3; H335 Aquatic Chronic 2; H411	≤10%
Salicylic Acid	CAS: 69-72-7 EC: 200-712-3	Acute Tox.4; H302 Eye Dam.1; H318	≤5%

See Section 16 for the full text of the H statements declared above.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice: In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.

Eye contact: Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.

Inhalation: Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Skin contact: Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing. Do NOT use solvents or thinners.

Ingestion: If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.

Protection of first aiders: No action shall be taken involving any personal risk without suitable training. 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.

4.2 Most important symptoms and effects, both acute and delayed: There are no data available on the mixture itself. If splashed in eyes or on skin, may cause irritation.

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

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powders.

Unsuitable extinguishing media: Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Decomposition products may include: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

5.3 Advice for fire-fighters

Cool closed containers exposed to fire with water. Do not release run off from fire to drains or watercourses.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Keep unnecessary people and unprotected personnel from entering.

6.2 Environmental precautions

Do not allow to enter drains or watercourses. If the product contaminated lakes, or sewers, inform the appropriate authorities in accordance with local regulations.

6.3 Methods and materials for containment and cleaning up

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.

6.4 Reference to other sections

See section 13 for additional waste treatment information.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Handle with care. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

7.2 Conditions for safe storage, including any incompatibilities

Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Store in original container and keep container tightly closed.

7.3 Specific end use(s)

Not available.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limits

Chemical Name	8hr TWA	15min STEL	Reference
4,4'-Isopropylidenediphenol	2mg/m^3	No data available	EH40/2005

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available.

8.2 Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area.

Personal Protective Equipment

Hygiene measures: Handle in accordance with good industrial hygiene and safety practices.

Hand protection: Wear suitable gloves tested to EN374.

Eye protection: Use safety eyewear designed to protect against splash of liquids.

Skin protection: Protective clothing.

Respiratory protection: Self-contained breathing apparatus may be required if handling in a confined space with no ventilation.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

State and colour:	Liquid.
Odour:	Solvent.
Odour threshold:	No data available.
Flammability:	Not relevant due to nature of product.
Flash point:	499°C [Pensky-Martens Closed Cup].
Lower explosion limit:	1.1% (Salicylic Acid).
Upper explosion limit:	13% (Phenylmethanol).
Explosive properties:	No data available.
Thermal decomposition:	No data available.
Auto-ignition temperature:	No data available.
Oxidising properties:	No data available.
Solubility in water:	Not relevant due to nature of product.
Solubility in other solvents:	No data available.
pH:	No data available.
Melting point / range:	Not relevant due to nature of product.
Boiling point / range:	202°C.
Relative Density:	1.04.
Vapour pressure:	0.02 kPa [at 20°C].
Vapour density:	3.72 [Air = 1].
Partition coefficient: n-octanol / water:	No data available.
Viscosity (kinematic):	>0.205cm^2/s @ 40°C.
Evaporation rate:	No data available.

9.2 Other information No data available.

10. STABILITY AND REACTIVITY

10.1 Reactivity	Stable under recommended transport and storage conditions.
10.2 Chemical stability	Stable under recommended storage and handling conditions.
10.3 Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	Prolonged heat.
10.5 Incompatible materials	Keep away from the following materials; oxidising agents, strong alkalis, strong acids.
10.6 Hazardous decomposition products	Decomposition products may include the following materials; carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Contains 3-aminomethyl-3,5,5-trimethylcyclohexylamine, m-phenylenebis (methylamine), bisphenol A. May produce an allergic reaction.

Acute toxicity

Chemical Name	Oral (LD50)	Inhalation (LC50)	Dermal (LD50)
Phenylmethanol	1230 mg/kg (Rat)	No data available	2000mg/kg (Rabbit)
1,3-Benzenedimethanamine	930mg/kg (Rat)	700ppm (Rat 1h)	2g/kg (Rabbit)
4,4'-Isopropylidenediphenol	1200 mg/kg	No data available	No data available

Acute Toxicity estimates

Route	ATE Value
Oral Dermal Inhalation (gases) Inhalation (vapours)	756.44 mg/kg 2682.93 mg/kg 50000 ppm 27.5 mg/l

Skin corrosion / irritation:

Chemical Name	Result	Species	Exposure
Phenylmethanol	Skin – Mild irritant	Man	48 hours 16 milligrams
	Skin – Moderate irritant	Pig	100 percent
	Skin – Moderate irritant	Rabbit	24 hours 100 milligrams
1,3-Benzenedimethanamine	Eyes – Severe irritant Skin – Severe irritant	Rabbit Rabbit	24 hours 50 micrograms 24 hours 750 micrograms
4,4'-Isopropylidenediphenol	Eyes – Severe irritant Skin – Mild irritant Skin – Mild irritant	Rabbit Rabbit Rabbit	24 hours 250 micrograms 24 hours 500 milligrams 250 milligrams

Serious eye damage / irritation: If splashed in eyes may cause irritation and redness.
Respiratory or skin sensitisation: No data available.
Repeated dose toxicity: No data available.
Carcinogenicity: No data available.
Mutagenicity: No data available.
Toxicity for reproduction: No data available.
Specific target organ toxicity (STOT):

Single exposure

Chemical Name	Category	Route of exposure	Target organs
4,4'-Isopropylidenediphenol	Category 3	Not applicable	Respiratory tract irritation

Further information: No data available.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Chemical Name	Species	Test	Value
Isophorone Diamine	Daphnia – Daphnia magna	Acute EC50 48h	17.4mg/l

Phenylmethanol	Fish – Lepomis macrochirus	Acute LC50 96h	10000µg/l
4,4'-Isopropylidenediphenol	Algae – Skeletonema costatum Algae – Prorocentrum minimum Daphnia magna – Neonate Crustaceans – Artemia sinica Fish – Rivulus marmoratus – embryo Algae – Chlorolobion braunii Crustaceans – Tigriopus japonicas Daphnia magna – Neonate Fish – Carassius auratus - Adult	Acute EC50 96h Acute EC50 72h Acute EC50 48h Acute LC50 48h Acute LC50 96h Chronic NOEC 4 days Chronic NOEC 21 days Chronic NOEC 21 days Chronic NOEC 90 days	1000µg/l 1.506mg/l 7.75mg/l 50.4µg/l 3.5mg/l 2mg/l 10µg/l 30µg/l 0.2µg/l
Salicylic Acid	Daphnia magna – Neonate Daphnia magna - Neonate	Acute LC50 48h Chronic NOEC 21 days	111.7mg/l 5.6mg/l

12.2 Persistence and degradability No data available.

12.3 Bioaccumulative potential

Chemical Name	$LogP_{ow}$	BCF	Potential
1,3-Benzenedimethanamine	-	2.69	Low
4,4'-Isopropylidenediphenol	-	20 to 67	Low

12.4 Mobility in soil No data available.
12.5 Results of PBT and vPvB assessment This product is not identified as a PBT/vPvB substance.
12.6 Other adverse effects No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Dispose of in accordance with local/national regulations. Do not allow to enter drains or watercourses. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Do not dispose of together with household waste. Contact licensed waste disposal company. Treat as hazardous waste. Empty containers should be taken to an approved waste handling site for recycling or disposal.

European Waste Catalogue (EWC):

08 01 11* - Waste paint and varnish containing organic solvents or other hazardous substances.

15 01 10* - Packaging containing residues of or contaminated by hazardous substances.

14. TRANSPORT INFORMATION

14.1 UN number	ADR/RID/AND; IMDG; ICAO	3066
14.2 UN Proper shipping name	PAINT RELATED MATERIAL	
14.3 Transport hazard class(es)	ADR/RID/ADN Class	8
	ADR/RID/ADN Class	Class 8
	ADR Label No.	8

	IMDG Class	8
	ICAO Class/Division	8
	ICAO Subsidiary Risk	8

Transport labels

14.4 Packing group	ADR/RID/AND; IMDG; ICAO	III
14.5 Environmental hazards	Marine Pollutant	No
14.6 Special precautions for user	EMS	F-A, S-B

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

15. REGULATORY INFORMATION

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

UK Regulatory References

The Control of Substances Hazardous to Health Regulations 2002 (S.I 2001 No.2677) with amendments.

EU Directives

Regulations (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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments. Regulation EU 453/2010 amending Regulation (EC) No 1907/2006.

Statutory Instruments

The Chemicals (Hazard information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716).

Guidance Notes

Health and Safety Executive Workplace Exposure Limits EH40.

15.2 Chemical Safety Assessment

Chemical safety assessments / reports are not required for mixtures.

16. OTHER INFORMATION

This safety data sheet is prepared in accordance with Regulation (EC) No 1907/2006 (REACH – Registration, Evaluation, Authorisation and Restriction of Chemicals) as amended and Regulation EU 453/2010.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008 (CLP):

Physical hazards: On basis of test data / Expert judgement
Health hazards: Calculation method
Environmental hazards: Calculation method

Tariff number: 39073000

TS72 Part B Hardener

Full text of H-statements referred to under sections 2 and 3

H302	Harmful if swallowed
H312	Harmful if in contact with skin
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H332	Harmful if inhaled
H335	May cause respiratory irritation
H360F	May damage fertility
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

Abbreviations and acronyms

CAS	Chemical Abstract Service (division of the American Chemical Society) – Section 3.
STOT	Single Target Organ Toxicity – Section 11.
TWA	Time Weighted Average - Section 8.
STEL	Short Term Exposure Limit - Section 8.
DNEL	Derived No Effect Level - Section 8.
NOEC	No Observed Effect Concentration – Section 12.
PNEC	Predicted No Effect Concentration - Section 8.
PBT	Persistent, Bioaccumulative, Toxic – Section 12.
VPvB	very Persistent and very Bioaccumulative – Section 12.
EC50	Effective Concentration, 50 percent – Section 12.
LC50	Lethal Concentration, 50 percent (Section 11/12).
LD50	Lethal Dose, 50 percent (Section 11).

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall only be used as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

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