

## TS72 Hardener

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

#### 1.1 Product Identifier

Material name : TS72 Hardener  
 Product code :

#### 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

Tel. : 01827 283322  
 Fax. : 01827 250143

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

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

### 2. HAZARDS IDENTIFICATION

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

Physical and Chemical Hazards	Not classified
Human health	Acute Tox.4; H302; Sk.Corr.1B; H314; Sk.Sens.1; H317; Eye Dam.1; H318; Repr.2; H361f
Environment	Aq.Chronic 3; H412

#### 2.2 Label elements

##### Labelling according to EC Directives: 1272/2008/EC

**Signal word:** Danger      **Contains:** Benzyl alcohol; 3-aminomethyl-3,5,5-trimethylcyclohexylamine;  
 Benzene-1,3-Dimethanamine; 4,4'-Isopropylidenediphenol

##### Pictograms:



<b>Hazard statements:</b>	H302	Harmful if swallowed.
	H314	Causes severe skin burns and eye damage.
	H317	May cause an allergic skin reaction.
	H361f	Suspected of damaging fertility.
	H412	Harmful to aquatic life with long lasting effects.

<b>Precautionary statements:</b>	P260	Do not breathe dust/fumes/gas/mist/vapours/spray.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P301+330+331	IF SWALLOWED: Rinse mouth. Do not induce vomiting.
	P303+361+353	IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.
	P310	Immediately call a POISON CENTRE/ Doctor.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P308+313 If exposed or concerned: Get medical advice/attention.

**2.3 Other hazards:** No data available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.2 Mixtures:

##### Hazardous components

Chemical Name	CAS No./ EC No./ Reg. No	Classification (1272/2008/EC)	Content
BENZYL ALCOHOL	100-51-6 202-859-9	Acute Tox.4; H302+332	25-50%
3-AMINOMETHYL-3,5,5- TRIMETHYLCYCLOHEXYLAMINE (Syn. Isophorone diamine)	2855-13-2 220-666-8	Acute Tox.4; H302+312 Sk.Corr.1B; H314 Sk.Sens.1B; H317 Aq.Chron.3; H412	25-50%
BENZENE-1,3-DIMETHANAMINE	1477-55-0 216-032-5	Acute Tox.4; H302+332 Sk.Corr.1B; H314 Sk.Sens.1B; H317 Aq.Chron.3; H412	<10%
4,4'-ISOPROPYLIDENEDIPHENOL	80-05-7 201-245-8 01-2119457856-23	Repr.2; H361f Eye Dam.1; H318 Sk. Sens.1; H317 STOT SE3; H335	<10%
SALICYLIC ACID	69-72-7 200-712-3	Acute Tox.4; H302 Eye Dam.1; H318	<5%

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

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

### 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

**General advice:** Remove casualty from exposure ensuring one's own safety whilst doing so. Take off any contaminated clothing and shoes/boots immediately. Never give anything by mouth to an unconscious person.

**Skin contact:** Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Transfer to hospital if burns are apparent.

**Eye contact:** Rinse with water for 15 minutes and seek medical advice if irritation persists.

**Ingestion:** Rinse mouth with water and give water to drink. Do not induce vomiting. Seek medical advice.

**Inhalation:** No undue effects in normal circumstances, if affected remove to fresh air and seek medical advice.

**4.2 Most important symptoms and effects, both acute and delayed:** May cause burns to skin and eyes.

**4.3 Indication of any immediate medical attention and special treatment needed:** See skin and eye contact information above.

### 5. FIRE-FIGHTING MEASURES

#### 5.1 Extinguishing media

Suitable extinguishing media: Product is non-flammable; use appropriate extinguishing media for the surrounding area.

Unsuitable extinguishing media: Not applicable.

#### 5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting: Irritating/toxic fumes may be released at elevated temperatures.

#### 5.3 Advice for fire-fighters:

Special protective equipment: Wear self-contained breathing apparatus. Use personal protective equipment.

Further information: Standard procedure for chemical fires. Use water spray to cool unopened containers. Do not allow fire run-off to enter drains.

### 6. ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Use personal protective equipment to deal with spillage.

#### 6.2 Environmental precautions

Contain the spillage using sufficient appropriate absorbent material. Do not discharge into drains or rivers, but if contamination to waterways has occurred, inform local authorities.

#### 6.3 Methods and materials for containment and cleaning up

Wipe up any liquid spillage with absorbent material such as sand, earth, or vermiculite, and place in a labelled container for disposal in accordance with local/national regulations.

#### 6.4 References to other sections

See sections 8 and 13 for personal protection and disposal information.

### 7. HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Handle with care.

#### 7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, well ventilated area between 5C and 25°C. Keep container tightly closed.

#### 7.3 Specific end use(s)

No information available.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

Chemical name	8hr TWA	15min STEL	Information/Reference
4,4'-Isopropylidenediphenol	10 mg/m <sup>3</sup>	-	Inhalable dust (EH40)

### 8.2 Exposure controls

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

#### Personal protective equipment

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

**Hand protection:** Neoprene or nitrile gloves; check with glove manufacturer for specific advice.

**Eye protection:** Tightly-fitting safety goggles.

**Skin and body protection:** Protective overalls.

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

**Environmental exposure controls:** Do not discharge into drains or rivers.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

State and colour	Coloured liquid
Odour	Amine-like
Odour Threshold	No data available
Flammability	Non-flammable
Flash point	>93°C
Lower explosion limit	1.3%
Upper explosion limit	13%
Explosive properties	Not explosive
Thermal decomposition	No data available
Auto-ignition temperature	No data available
Oxidising properties	Non-oxidising
Solubility in water	Negligible
Solubility in other solvents	Not determined
pH	Data not available
Melting point/range	Not determined
Boiling point/range	202°C
Density	1.04
Vapour pressure	0.02 kPa @ 20°C
Vapour density	3.72 (air = 1)
Partition coefficient: n-octanol/water	No data available
Viscosity (kinematic)	>0.205 cm <sup>2</sup> /s @ 40°C
Evaporation rate	No data available

**9.2 Other information** VOC content: 418 g/l

## 10. STABILITY AND REACTIVITY

<b>10.1 Reactivity</b>	Generally non-reactive.
<b>10.2 Chemical stability</b>	Stable under normal conditions.
<b>10.3 Possibility of hazardous reactions</b>	None if stored and used as directed.
<b>10.4 Conditions to avoid</b>	Prolonged heat.
<b>10.5 Incompatible materials</b>	Strong acids. Strong alkalis. Strong oxidising agents.
<b>10.6 Hazardous decomposition products</b>	Oxides of carbon. Oxides of nitrogen.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

Chemical name	Oral (LD50)	Inhalation (LC50)	Dermal (LD50)
Benzyl alcohol	1230 mg/kg (Rat)	53 mg/kg (Rat) 4h	No data available
4,4'-Isopropylidenediphenol	3250 mg/kg (Rat)	No data available	No data available

<b>Skin corrosion/irritation:</b>	May cause skin burns.
<b>Serious eye damage/eye irritation:</b>	May cause eye damage.
<b>Respiratory or skin sensitisation:</b>	May cause skin sensitisation.
<b>Repeated dose toxicity:</b>	No data available.
<b>Carcinogenicity:</b>	Not carcinogenic.
<b>Mutagenicity:</b>	Not mutagenic.
<b>Toxicity for reproduction:</b>	4,4'-Isopropylidenediphenol is suspected of damaging fertility.
<b>Specific target organ toxicity (STOT):</b>	No data available.

#### Further information

The product as a whole is unlikely to cause any significant adverse effects, particularly when the advice in Sections 7 and 8 is followed.

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Chemical name	Species	Test	Value
Benzyl alcohol	Fish	LC50 96h	10 mg/l
3-aminomethyl-3,5,5-trimethylcyclohexylamine	Daphnia	EC50 48h	17.4mg/l
4,4'-Isopropylidenediphenol	Daphnia	EC50 48h	7.75 mg/l


<b>12.2 Persistence and degradability</b>	Not readily biodegradable.
<b>12.3 Bioaccumulative potential</b>	Low bioaccumulation potential.
<b>12.4 Mobility in soil</b>	Negligible water solubility.
<b>12.5 Results of PBT and vPvB assessment</b>	No data available.
<b>12.6 Other adverse effects</b>	Harmful to aquatic organisms.

### 13. DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

Disposal operations: Dispose of in accordance with local and national regulations. Do not dispose of waste into sewer.  
 Do not dispose of together with household waste. Contact licensed waste disposal company.  
 Empty containers should be taken to an approved waste handling site for recycling or disposal.  
 Do not burn or use a cutting torch on the empty container.

### 14. TRANSPORT INFORMATION

<b>14.1 UN number</b>	ADR/RID/ADN; IMDG; ICAO	3066
<b>14.2 UN proper shipping name</b>	PAINT RELATED MATERIAL	
<b>14.3 Transport hazard class(es)</b>	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	
<b>14.4 Packing Group</b>	ADR/RID/ADN; IMDG; ICAO	III
<b>14.5 Environment hazards</b>	Marine Pollutant	No
<b>14.6 Special precautions for user</b>	EMS	F-A, S-B
<b>14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>		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

A Chemical Safety Assessment has not been performed on this product.

### 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.

Tariff number: 39073000

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

H302	Harmful if swallowed
H312	Harmful 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
H361f	Suspected of damaging fertility
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).

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 be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

The IM Group utilizes a process of continuous product improvement for all of our products. While the IM Group strictly adhere to our products specifications, we routinely implement product improvements. Therefore, please contact us for our most current product specifications. The IM Group warrants the quality of this product when used according to directions. Apply protective coatings per Company Standards. User shall determine suitability of product for use and assumes all risk. The seller will not accept liability for more than product replacement.