Product name: Crack Binder 812

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CECTION	1.	Idantification	of	tha	auhatanaa	Immomention	and	of the	a among /un dantaling	
SECTION	11	Identification	OI	une	substance	/preparation	and	or the	company/undertaking —	
						r r				

1.1 Product identifier			
Product name:	Crack Binder 812		
1.2 Relevant identified uses of	the substance or mixture and uses adviced against		
Recommended use:	Printing for textile, paper, wood, and film.		
Product description:	Water based binder of resin.		
1.3 Details of the supplier of th	e Safety Date Sheet		
Supplier:	Matsui Shikiso Chemical Co., Ltd.		
	64, Kamikazan Sakuradani-cho, Yamashina-ku, Kyoto, 607-8466, JAPAN Telephone no.: +81 75 594 5612		
E-mail:	msc-export@msc-color.co.jp		
Agency:	Matsui International Co., Inc.		
	1501 West 178th Street, Gardena, CA 90248, U.S.A. Telephone no.: (310) 767-7812		

#### 1.4 Emergency telephone number

+81 (75) 594-5612 / (310) 767-7812

SECTION 2. Hazards identification				
2.1 Classification of the substa	2.1 Classification of the substance or mixture			
Classification acording to regulation (EC)No. 1272/2008 [CLP]: See Section 16.				
Classification acording to Council Drective 67/548/EEC: Not classified.				
2.2 Label elements	None.			
2.3 Other hazards	None.			
SECTION 3. Composition/information on ingredients				
Resin: Titanium dioxide	Concentration approx.15 % CAS No. 25931-51-5 EC No. polymer Concentration approx. 5 %			
Water and other new	CAS No. 13463-67-7 EC No. 236-675-5 n-hazardous ingredients: the rest			
Hazardous ingredient:	n-hazardous ingredients: the rest This product does not include hazardous ingredient.			

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4.1	Description	of first	aid measures	

Inhalation:	If inhale a large quantity, remove to fresh air. If needed, get medical attention.	
Skin contact:	Wash with mild soap and water. If needed, get medical attention.	
Eye contact:	Immediately flush eyes with water for at least 15minutes. Seek medical attention as needed.	
Ingestion:	Rince mouse thoroughly with water. Induce vomiting if possible. Seek medical attention as needed.	
4.2 Most important symptoms and effects, both acute and delayed		
	No symptoms known currently.	
4.3 Indication of any immediate medical attention and special treatment neede		
No special measures needed.		

## SECTION 5. Fire-fighting measures

5.1 Extinguishing media	
Suitable extinguishing media	: In case of combustion, use water, dry chemical, or $CO_2$ gas. (This product is not combustible under normal condition due to its aqueous property.)
Unsuitable extinguishing med	lia:
	No data available.
5.2 Special hazards arising from	the substance or mixture
Hazardous combustion produ	cts:
	No data available.
5.3 Advice for firefighters:	In case of fire, wear respirator.
SECTION 6. Accidental rel	ease measures
6.1 Personal precautions, protec	tive equipment and emergency procedures
	Wear protective clothing and equipment as needed. Ventilate area.
6.2 Environmental precautions	Avoid releasing spilled material into rivers and/or lakes to prevent environmental impact. If material is released to public water in large amounts, advise local authority.
6.3 Methods and materials for c	containament and cleaning up
	For small spill, absorb with dry sand, soil, saw dust or rag. Collect into container for disposal and wipe the remaining up with rag. For large spill, dike with soil, blanket or sandbags to prevent from entering public waters, and collect into container with shovel or vacuum.
6.4 Reference to other sections	
	Reffer to section 8 and 13.

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SECTION 7. Handling and storage				
7.1 Precautions for safe handling				
Protective measures:	Wear suitable protective equipment and clothing as needed to prevent the material from contacting skin and eyes. Local exhaust ventilation or general ventilation is recommended during indoor operation.			
Advice on general occupational hygiene: Wash thoroughly after handling. Do not eat, drink, or smoke during we				
7.2 Conditions for safe storage, including any incompatibilities Technical measures storage conditions:				
	Keep container airtight. Store in a cool and dark place away from excessive heat and direct sunlight.			
Packaging materials:	Impermeable materials.			
7.3 Specific end uses	Reffer to Section 1.2			
SECTION 8 Exposure cont	rols/personal protection			
8.1 Control parameters Occupational exposure limit values: Titanium dioxide:				
	TWA 10 mg/m <sup>3</sup> (ACGIH, 2011) MAK 1.5 mg/m <sup>3</sup> (Respirable fraction) (DFG, 2006)			
8.2 Exposure controls				
Appropriate engineering con	trols:			
	Local exhaust ventilation or general ventilation is recommended during indoor operation.			
Personal protection equipment	nt:			
- Respiratory protection:	Wear mask when applicable.			
- Hand protection:	Wear rubber or plastic gloves.			
- Eye protection:	Wear safety glasses or chemical goggles.			
- Skin and body protection:	Wear long pants, long sleeves and face shield when applicable.			
Hygiene measures:	Nothing in particular.			
SECTION 9. Physical and	chemical properties			
9.1 Information on basic physical and chemical properties				
Appearance:	White paste.			
Odour:	Acrylic odour.			
pH:	7.0 - 8.5			

Ououi.	Actylic odoul.	
pH:	7.0 - 8.5	
Melting point:	No data available.	
Boiling point:	Approx. 100 °C	
Flash point:	No data available.	
Evaporation rate:	No data available.	
Flammability:	If this product is dry, it may be flammable.	
Upper/lower flammability or explosive limits:		

Upper/lower flammability or explosive limits:

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		No data available.
	Vapour pressure:	No data available.
	Vapour density (air=1):	No data available.
	Relative density:	$1.10 \pm 0.05$
	Solubility:	Miscible.
	Partition coefficient:n-octano	/water:
		No data available.
	Auto-ignition temperature:	No data available.
	Decomposition temperature:	No data available.
	Viscosity:	No data available.
	Explosive Properties:	Not applicable.
	Oxidizing Properties:	Not applicable.
	SECTION 10. Stability and	reactivity
	10.1 Reactivity	No specific reactivity under normal condition.
	10.2 Chemical stability	Stable under normal handling and using condition.
10.3 Possibility of hazardous reaction		
		Nothing in particular.
	10.4 Conditions to avoid	Nothing in particular.
	10.5 Incompatible materials	Nothing in particular.
	10.6 Hazardous decomposition	products
		Nothing in particular.

11.1 Information on toxicological effects			
Acute toxicity:	Oral LD50 > 2,000 mg/kg (caluculation method)		
Irritation:	No data available.		
Corrosivity:	No data available.		
Sensitisation:	No data available.		
Repeated dose toxicity:	No data available.		
Carcinogencity:	Not applicable.		
Mutagenicity:	No data available.		
Toxicity for reproduction:	No data available.		

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SECTION 12. Ecological information		
12.1 Toxicity		
Acute toxicity:	LC50 > 100  mg/L (caluculation method)	
Chronic toxicity:		
Fish:	No data available.	
Crustacea:	No data available.	
Algae/aquatic plants:	No data available.	
12.2 Persistence and degradabil		
No data available.		
12.3 Bioaccumulative potential		
12.4 Mobility in soil	No data available.	
12.4 Woolifty in soli 12.5 Result of PBT and vPvB a		
12.5 Result of PBT and VPVB a		
	No data available.	
12.6 Other adverse effects	No data available.	
SECTION 13. Disposal considerations		
13.1 Waste treatment method		
	Dispose of in accordance with local, national, and EU regulations.	
Sewage disposal-releavant in	fomation: Do not dump this product into sewers, on the ground or into any body of water.	
SECTION 14. Transport information		
14.1 UN No.	Not applicable.	
14.2 UN proper sipping name	Not applicable.	
14.3 UN Class	Not applicable.	
14.4 UN Packing Group	Not applicable.	
14.4 UN Packing Group 14.5 Environmental hazards	Not applicable. Not applicable.	
14.4 UN Packing Group	Not applicable. Not applicable.	
<ul><li>14.4 UN Packing Group</li><li>14.5 Environmental hazards</li><li>14.6 Special precautions for use</li></ul>	Not applicable. Not applicable. er	

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SECTION 15. Regulatory information		
15.1 Safety, health and environmenatal regulation/legislation specific for the substance or mixture		
EU regulations		
(EC) No. 2037/2000:	Not applicable.	
(EC) No. 689/2008:	Not applicable.	
(EC) No. 850/2004:	Not applicable.	
15.2 Chemical Safety Assessment		
	No Chemical Safety Assessment has been carried out for this mixture.	
SECTION 16. Other information —		
Classification acording to regu	lation (EC)No. 1272/2008 [CLP]: Not classified.	
Label elements:	None.	
Full text of H-statements and R-phrases:		
	None.	
Indication of changes:	This updated MSDS has changed to adapt to Regulation (EU) No. 453/2010.	
Abbreviations and acronyms: ACGIH	American Conference of Governmental Industrial Hygienists, Inc.	
CAS	Chemical Abstracts Service number	
CLP	Classification Labelling Packaging Regulation ; Regulation (EC) No 1272/2008	
DFG	Deutsche Forschungsgemeinschaft	
IBC-Code	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk	
IOELV	Indicative Occupational Exposure Limit Value	
LC50	Lethal Concentration to 50 % of a test population	
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)	
MAK	Maximale Arbeitsplatz Konzentrationen	
MARPOL	The International Convention for the Prevention of Pollution from Ships	
PBT	Persistent, Bioaccumulative and Toxic substance	
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006	
STEL	Short Term Exposure Limit	
vPvB	Very Persistent and Very Bioaccumulative	

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Key literature references and sources for data:

Guidance on the compilation of safety data sheets (Version 1.1 – December 2011) Chemical Risk Information Platform (CHRIP: http://www.safe.nite.go.jp/japan/db.html) IUCLID Chemical Data Sheet

The information set forth herein is to the best knowledge and belief of MATSUI SHIKISO CHEMICAL CO., LTD. If not employed as directed, we do not guarantee that the hazard precautions or procedures mentioned above are the only ones which exist and we do not assume responsibility in case of unusual use of this product.