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Product Title and	d Summary		
Product identifier	Ceramic cut-off wheel		
P r o d u c t descriptions	TU Type30 (ISO type 41) TU CERAMIC Cut-Off Wheel All size compatible premium ceramic resinoid cut-off wheels of general metal cutting and machining tools		
1. Company identification			

# ManufactureTU GLOBAL Co.,Ltd.A d d r e s sPOSEUNG-EUP PYEONGTAEK-CITY KYONGGI-DO, KOREADepartmentR & D Technology Development Institutee - m a i lrnd@tuglobal.krCreation date2013.02.28Revision Date2015.05.26

# Notices

Cut-off wheel is a safe product that does not cause any danger during transport or storage. When using the tool, install the proper protection devices to protect the worker, wear protective gear means to protect against dust generated while also cutting jobs, especially for workers. It may have to appropriate action to prevent physical damage during transportation or storage of the product,

if necessary.

# 2. Harzad·Risk

The cut-off wheel contain a fully cured phenol / formaldehyde resin.

If so, the dust produced when cutting trace of phenol and formaldehyde can be exposed over a long period of time remaining in the dust skin irritation and breathing difficulties can come.

Pictograms	
Hazardous / phrases	<ul> <li>H315 It causes skin irritation.</li> <li>H319 It causes serious eye irritation.</li> <li>H335 May cause respiratory irritation.</li> <li>H373 It may cause damage to the body through prolonged or repeated</li> </ul>
	exposure.
Precautionary statements	





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P260	Do not breathe (dust, fumes, gas, vapor, mist, spray).	
P261	(Dust, fumes, gas, vapor, mist, spray) Avoid inhalation of.	
P264	Wash after handling the treated area thoroughly	
P270	When using this product, Do not eat, drink or smoke.	
P271	Use only outdoors or in a well-ventilated area.	
Corre	spondence	
P302+	P352 skin contact : Wash with plenty of soap and water.	
P304+	P340 Inhalation : keep at rest in a position comfortable for bre	eathing
	fresh air.	
P305+	P351+P338 Eye contact : Rinse cautiously with water for severa	I minutes.
	Remove contact lenses if possible. Continue rinsi	٦g.
P312	If you feel uncomfortable, call a poison center or physician.	
P314	If you feel uncomfortable Get medical attention.	
	P313 If skin irritation occurs: Get medical attention.	
P337+	P313 If irritation persists in the snow Get medical attention.	

Urgent risk and hazard information No known data

# 3. Composition / Information on Ingredients

Material	CAS NO.	Percent (%)
Aluminum Oxide(Premium Ceramics)	1344-28-1	30 - 50
Zirconium Oxide	53801-45-9	20 - 30
Cured phenolic resin	9003-35-4	15 - 25
calcium carbonate	471-34-1	1 - 20
Fiberglass	(N/A)	1 - 15

# 4. First Aid Measures

Eye contact	<ol> <li>Flush with large amounts of water.</li> <li>Remove contact lenses if easy to do.</li> </ol>
	<ol> <li>Continue rinsing</li> <li>If signs/symptoms persist, get medical</li> </ol>
Skin contact	<ol> <li>Wash with soap and water.</li> <li>If signs/symptons develop, get medical attention.</li> </ol>





# © TU Global co.,Ltd. in Korea. All rights reserved Page. 3/5 Inhalation 1. Remove person to fresh air 2. If you feel unwell, get medical attention 2. If you feel unwell, get medical attention If Swallowed 1. Rinse mouth. 2. If you feel unwell, get medical attention 2. If you feel unwell, get medical attention Note to physician 1. Not available

# 5. Fire Fighting Measures

Flash point	N / A
Extinguishing media	Water, foam, sand, powder or $\text{CO}_2$
Special hazards	N / A
Special protective action	N / A

# 6. Accidental release measures

Not applicable

# 7. Handling and Storage

- 1. Keep the materials out of direct sunlight
- 2. Do not place the materials on ground and concrete floor
- 3. A buffer storage area is used to maintain a flat, level surface and rough handling or dropping, if necessary
- 4. Avoid humid place and heating element such as heater and radiator
- 5. Keep it in condition of low temperature and humidity

# 8. Personal Protection

dust mask Head protection Hand protection Face protection Eye protection To minimize the risk of inhalation , wear dust mask Wear protective helmet Wear protective gloves Wear proective mask Wear protective goggles or face shield



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Hearing protection

Use	hearing	protection
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9. Physical and	Chemical	Properties
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Boiling Point ( $^{\circ}$ )	N / A	Specific Gravity (H <sub>2</sub> O=1)	N / A
Vapor Pressure (mm Hg.)	N / A	Percent, Volatile by Volume (%)	N / A
Vapor Density (AIR=1)	N / A	Evaporation rate (Butyl Acetate =1)	N / A
Solubility in Water autoignition	N / A	Flash point	N / A
temperature	N / A	Appearance and odor	N / A

# 10. Stability and Reactivity

chemical Stability Condition to Avoid	Stable None.
Incompatibility (materials to avoid)	Strong acids, Strong bases & Strong oxidizing agents may modify the mechanical characteristics of the products and create safety hazards when used on machines.
Hazardous Decomposition Product	None.
Hazardous Polymerization	Will nor occur

# 11. Toxicological Information

No toxicological effects if inhaled or with eye or skin contact are known

# 12. Ecological Information

Ecotoxicity	No effects known
Mobility	No potentials kown
Persistence and degradability	No biodegradable potentials known
Bioaccumulative potential	No potential known
Other hazardous effects	No effects known



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# Material Safety Data Sheet

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## 13. Disposal Considerations

Follow national and regulation.

## 14. Transport Information

The product is not covered by international regulation on the transport of dangerous goods.

## 15. Regulatory information

No specific issues

### 16. Other Information

- 1) The purpose of this MSDS is because it was created on the basis of known knowledge, experience and relevant regulations but not to fully guarantee the product itself
- 2) The purpose of this MSDS Co. sold for commercial purposes without prior authorization and consent of the TU GLOBAL Co.,Ltd. or redistribute any act of translation is that the Copyright Act be punished
- 3) Status of national regulatory legislation will determine on the basis of the purpose and general / ordinary cases of this product