

SAFETY DATA SHEET**1. Chemical product and company identification**

Product identifier used on the label	
Product Name	XYRON™ EV103, T0702, TT520, TT521, TG101
SDS No.	XY-W005-1
Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party	
Company Name	ASAHI KASEI CORPORATION
Address	1-105 Kanda Jinbo-cho, Chiyoda-ku, Tokyo 101-8101 Japan
Contact Telephone Number	ASAHI KASEI CORPORATION(JAPAN) Phone +81- 3-3296-3386 , Fax +81- 3-3296-3473 ASAHI KASEI PLASTICS (NORTH AMERICA),Inc. Phone +1-517-223-2000 ASAHI KASEI EUROPE GmbH Phone +49- 211-8822-030 , Fax +49-211-8822-0333 ASAHI KASEI PLASTICS SINGAPORE PTE. LTD. Phone +65-6324-3001 , Fax +65-6324-3808 ASAHIKASEI PLASTICS (THAILAND) CO., LTD. Phone +66-35-350-720 , Fax +66-35-350-716 ASAHI KASEI PLASTICS (SHANGHAI) CO., LTD. Phone +86-21-6391-5252 , Fax +86-21-6391-5886 ASAHI KASEI PLASTICS (HONG KONG) CO., LTD. Phone +852-2151-4000 , Fax +852-2116-4300 ASAHI KASEI PLASTICS (GUANGZHOU) CO., LTD. Phone +86-20-8527-1616 , Fax +86-20-8527-1700
Emergency Telephone Number	CHEMTREC(US) Phone (U.S.) 800-424-9300 International +1-703-527-3887(collect) 24 hours Everyday BIG v.z.w.(EU) Phone +32-1-458-4545, Fax +32-1-458-3516 ASAHI KASEI CORPORATION(JAPAN) R&D Planning and Business Development Performance Plastics Technical Dept. (XYRON) Phone +81-44-271-2561, Fax +81-44-271-2168 Business time : 9:00~18:00 on weekday
Recommended use and restriction on use	
Recommended use	Plastic ingredient for home electronics, electronic materials, automotive materials, industrial materials, consumer goods. .
Restriction on use	<Notice & warning concerning the use of XYRON> Do not use XYRON for the parts below. <ul style="list-style-type: none"> • Medical vessels, packages, apparatus, parts which touch inside the human body, mucous membranes, body fluid, blood, and medicine permanently or continuously for a long term (more than 30 days). • Equipments, parts which contact with food containers/ packaging / equipment/ parts and drinking water. • Toys which contacts with mouth, drinking water etc. <p>Note that XYRON may be used for these applications with concretization of the applications if these application only touch temporary. Please contact us for detail.</p>

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2. Hazards identification

Classification of the chemical

[GHS-Classification]

Physical Hazards	Classification not possible
Health Hazards	Classification not possible
Environmental Hazards	Classification not possible
Other Hazards	Non

[GHS label element]

Pictogram or symbol	Non
Signal word	Non
Hazard Statements	Non
Special Hazard	<ul style="list-style-type: none"> • Gas is generated in melted condition. • Can burn in a fire.

[Precautionary statements]

Safety measures	<ul style="list-style-type: none"> • Do not handle until all safety precautions have been read, understood and precautionary measures are taken. • Do not eat, drink or smoke when using this product. • Wear protective gloves, eye-protection if necessary. Take burn prevention measures especially when handling melted resin. • Install effective local exhaust in extrusion press because gas is generated.
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3. Composition and information of the ingredients of the hazardous chemical

Chemical name or generic name;

Mixture of poly (phenylene ether), styrenic resin, polypropylene, and elastomer

Product Name: EV103, T0702, TT520, TT521, TG101

Components	Product Name	Contents[wt%]				CAS No.	EINECS No.
		EV103	T0702	TT520 TT521	TG101		
Poly(2,6-dimethyl-1,4-phenylene ether)						25134-01-4	N/A
Polystyrene, High Impact polystyrene		5-15	70-80	30-40	10-20	9003-53-6 and/or 9003-55-8	N/A
Polypropylene		80-90	5-15	30-40	35-45	9003-07-0	N/A
Styrenic Elastomer		1-5	5-15	5-15	5-15	66070-58-4 and/or Confidential	N/A
Elastomer		0-3	0-3	0-3	0-3	Confidential	N/A
Inorganic filler (Glass fiber, Glass flake, Mineral)		-	-	15-25	25-35	65997-17-3 and/or 14807-96-6 and/or 12001-26-2	266-046-0 and/or 238-877-9 and/or N/A
Additives (Stabilizer etc.)		<3	<3	<3	<3	Confidential	Registered
Petroleum hydrocarbon oil (Mineral oil)		0-0.5	0-0.5	0-0.5	0-0.5	Confidential	Registered
Colorant		0-6	0-6	0-6	0-6	See Appendix	See Appendix
Total		100	100	100	100	-	-

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[Appendix] Colorant

Component	Content[wt%]	CAS No.	EINECS No.
Carbon Black	0 – 3	1333-86-4	215-609-9
Titanium oxide (IV)	0 – 5	13463-67-7	236-675-5
Iron oxide	0 – 5	1309-37-1	215-168-2
Others	0 – 5	Registered	Registered
Total	0 – 6		

- Additives don't include components influencing hazard classification.
- All of ingredients are listed on TSCA, EINECS (ELINCS), ENCS (JPN), ISHL (JPN), IECSC (CHN) inventories.
- These ingredients are corresponding to the REACH regulations.
- These products do not contain Substances of Very High Concern (SVHC) concentration above 0.1wt%

4. First aid measures

Necessary first-aid measures by relevant routes of exposure

Swallowed.	If the pellet was swallowed accidentally, vomit immediately and get medical attention/advice if any abnormality occurs.
Eyes.	<ul style="list-style-type: none"> • Do not rub eyes. Immediately flush eyes with running water for at least 15 minutes. • Remove contact lenses immediately if worn. • Seek immediate medical attention.
Skin.	Do not peel off melted material; cool down affected area with plenty of water for more than 30 minutes. Then get medical attention.
Inhaled (Gases from the molten resin)	When gases from the molten resin are inhaled, remove the victim from the area to give fresh air. If you feel unwell, seek immediate medical attention.
Protection who gives the first aid.	Those who suffer from any abnormality should get medical attention.
Indication of immediate medical attention and special treatment needed, if necessary	No information

WARNING :Do not attempt removal of plastic without medical assistance. Do not use solvent for removal.

For processing fume inhalation irritation leave contaminated area and breathe fresh air. If coughing, difficult breathing or any other symptoms develop, seek medical attention at once, **even if symptoms develop at a later time.**

For skin contacts with condensate, immediately wash thoroughly with soap and water If irritation develops, seek medical attention.

5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	Spraying water and other extinguisher can be used.
Specific hazards arising from the chemical	Strong heat, black fume and gases such as CO ₂ , CO may be generated on fire.

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Special protective equipment and precautions for fire-fighters	Use the same fire fighting method as the general fire. Fight fire from the safe distance. Wear fire retardant clothing and respiratory equipment when fighting fire. Work from the windward.
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6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Clean up the floor immediately because it may be slippery if pellet or powder remains.
Emergency measures and protective equipment	Wear protective equipment (safety glasses, dust mask, and as necessary, respirator) to avoid contact with dust, inhalation.
Environmental precautions	Collect all leakage on the water surface such as drain system considering adverse effect to avian species and fish.
Methods and materials for containment and cleaning up	Sweep up or clean with vacuum cleaner, collect and dispose of.
Prevention of secondary disaster	None.

7. Handling and storage

< Precautions for safe handling >

Engineering measures	Wear eye protection, heat-resistant gloves, long-sleeved work clothing for burn prevention when handling melted resin. Avoid breathing gases generated from the melted resin.
Local exhaust, total ventilation	Use effective local exhaust at the generating point of gases because gasses are generated when handling melted resin using extruder or injection molding machine. Perform total ventilation by ventilation fan at indoor or working area operating above procedure.
Cautions to fire	This resin in pellet condition is flame-retardant resin component and does not ignite or explode at room temperature. However gases may be generated if fire occurs in neighborhood and fire fighting activity may become difficult. Therefore keep working area neat and tidy, do not use fire. <ul style="list-style-type: none"> • Do not use heater with open flame. (stove, open fire, etc.) • Do not carry match, lighter. No smoking. • Ground facilities and equipments (extruder, molding machine, air-conveying line, bag filters, etc.) in order to prevent static discharge. • Use safe non-sparking tools. Avoid generation or approach of any other ignition sources.
Precautions for safe handling	<ul style="list-style-type: none"> • Do not eat or drink when using this product • If leaked on the floor, remove and keep cleaned up. If leakage is left the floor becomes slippery and may cause a fall. • Determine and keep proper working process.
Storage	Store at the place where fulfills below storage conditions. <ul style="list-style-type: none"> • Protect from direct sunlight. • Protect from high temperature and humidity. • Store and keep away from ignition source. • Take precautionary measures against static discharge.
Safe containers and packaging material	Containers and packaging materials should fulfill storage conditions.

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8. Exposure controls/personal protection

Appropriate engineering controls	See "7. Handling and storage" for facility measures.
Administrative level, allowable limit	Gases are generated from melted resin but administrative level and allowable limit are not established.
<Dust>	
Allowable limit for this resin is not established in AGCIH. However below values are applicable for dust.	
Airborne Exposure Limit (reference 2, 3)	
OSHA PEL-TWA	3.5 mg/m ³ (Carbon black) 15mg/m ³ (Total dust/Titanium oxide(IV)) 15 mg/m ³ (Total PNOR) 5 mg/m ³ (Respirable PNOR) *PNOR: Particulates not otherwise regulated
ACGIH TLV-TWA	3 mg/m ³ (Inhalable fraction/ Carbon black) 10 mg/m ³ (Titanium oxide (IV)) 5 mg/m ³ (Respirable fraction/ Iron oxide) 3 mg/m ³ (Respirable PNOS) 10 mg/m ³ (Inhalable PNOS) *PNOS: Particles (insoluble or poorly soluble) Not Otherwise Specified
< Individual protection measures, such as personal protective equipment >	
Respiratory protection	Wear gas mask for organic gas when working in a place where generated gas or fume may be breathed. Wear dust control mask when dust is caused by the works such as machinery processing of resin product, sanding, removing rising powder from bag filter, cleaning of sieving machine.
Hand protection	It is recommended to wear hand protection if necessary. Especially when handling melted resin, wear heat-resistant gloves for burn prevention.
Eye protection	It is recommended to wear side-shielded eye protection made with resin, resin goggles.
Skin and body protection	Wear long-sleeved clothing when handling melted resin for burn prevention.

9. Physical and chemical properties

Appearance (physical state, color, etc.)	Plastic solid. Yellow – brown, or colored pellet
Odor	None
pH	Not applicable
Melting point	Ca. 165 deg. C
Decomposition point	>300 deg C
Flash point	>300 deg C
Ignition point	>400 deg C
Explosion limit	No data
Upper / lower	Precautionary measures for static discharge are necessary if handled as powder
Specific gravity	EV103, T0702 : 0.90 - 1.05 TT520, TG101 :: 1.02 - 1.35
Solubility	
Water	Insoluble
Other solvent	Soluble in organic solvent (hot xylene etc)

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Partition coefficient: <i>n</i> -octanol/water	No data
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10. Stability and reactivity

Chemical stability	Stable at room temperature as far as stored protected from direct sunlight, away from fire or heat source.
Reactivity	Not reactive under recommended conditions of handling, storage, processing and use. When heated to approximately 300 degree C to 400 degree C, the resin begins to decompose and emit decomposition gases. Immediately cool down the molten resins, if necessary.
Conditions to avoid	Direct sunlight, fire, heat source, and dust generation
Incompatible materials	None.
Hazardous decomposition	Black fume, gases such as CO ₂ , CO may be generated in combustion.
Hazardous polymerization	Will not occur.
Storage stability	Stable
Oxidizing property	None

11. Toxicological information

The classifications of each component in products are referred to reference 1 and 4.

The classification of Carbon Black is referred to the information from supplier. (Reference 5)

	Resin Filler Others	Petroleum hydrocarbon oil (Mineral oil)	Carbon black	Titanium oxide	Iron oxide	Classification of Products
content	≥93.5wt%	0-0.5wt%	0-3wt%	0-5wt%	0-5wt%	
Skin corrosion/irritation	Classification not possible	Classification not possible	Classification not possible	Not classified	Category 2	Classification not possible ¹⁾
Serious eye damage/eye irritation	Classification not possible	Classification not possible	Classification not possible	Category 2B	Category 1	Classification not possible ²⁾
Carcinogenicity	Classification not possible	Classification not possible	Classification not possible	Category 2	Not classified	Classification not possible ³⁾
Specific target organ toxicity - Single exposure	Classification not possible	Classification not possible	Classification not possible	Classification not possible	Category 3 (respiratory tract irritation)	Classification not possible ⁴⁾
Specific target organ toxicity - Repeated exposure	Classification not possible	Classification not possible	Classification not possible	Classification not possible	Category 1 (respiratory organs)	Classification not possible ⁵⁾

Note;

- The products cannot be classified because the hazardous substances are not exposed to the skin directly for they are covered by the product resin and not likely to be separated by the exudation etc.
- The products cannot be classified because the hazardous substances are not exposed to the eyes directly for they are covered by the product resin and not likely to be separated by the exudation etc.
- The Toxicological information of Titanium oxide has been evaluated under the conditions of inhalation exposure. The products cannot be classified because these substances are not inhaled as dust, gas, vapor and mist for they are covered by the product resin and not likely to be separated by the exudation etc.

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4. The Toxicological information of Iron oxide has been evaluated under the conditions of inhalation exposure. The products cannot be classified because these substances are not inhaled as dust, gas, vapor and mist for they are covered by the product resin and not likely to be separated by the exudation etc.
5. The product contains less than 5wt% of Iron oxide, which is classified as Category 1 (respiratory), but the hazardous substances are not inhaled as dust, gas, vapor and mist for they are covered by the product resin and not likely to be separated by the exudation etc.

[Appendix] The classification of Petroleum hydrocarbon oil (Mineral oil)

The classification of petroleum hydrocarbon oil is referred to the below. (reference 1, a), and b))

Hazard class	According to Ref.1	Classification of mineral oil contained in these product (Ref.a), b))
Acute toxicity (inhalation: dust, mist)	Category 4	Classification not possible ^{a),b)}
Skin corrosion / irritation	Category 3	Classification not possible ^{b)}
Serious eye damage / eye irritation	Category 2B	Classification not possible ^{b)}
Germ cell mutagenicity	Category 2	Classification not possible ^{a), b)}
Carcinogenicity	Not classified (Highly refined oil)	Classification not possible ^{a), b)}
Specific target organs/systemic toxicity following single exposure	Category 2 (lung)	Classification not possible ^{a), b)}
Specific target organs/systemic toxicity following repeated exposure	Category 1 (lung, skin)	Classification not possible ^{a), b)}
Aspiration hazard	Category 2	Classification not possible ^{a), b)}

Reference;

a) The information from supplier (SDS)

b) EC European Commission, European Chemical Bureau "IUCRID", (2000)

12. Ecological information

The classifications of each component in products are referred to reference 1 and 4.

The classification of Carbon Black is referred to the information from supplier. (Reference 5)

	Resin Filler Others	Petroleum hydro- carbon oil (Mineral oil)	Carbon black	Titanium oxide	Iron oxide	Classification of Products
content	≥67wt%	≤5wt%	0-3wt%	0-5wt%	0-5wt%	
Hazardous to the aquatic environment (acute)	Classification not possible	Classification not possible	Not classified	Classification not possible	Classification not possible	Classification not possible
Hazardous to the aquatic environment (chronic)	Classification not possible	Classification not possible	Classification not possible	Classification not possible	Classification not possible	Classification not possible

13. Disposal considerations**Waste treatment methods**

Dispose of according to regulation and standard of regional government.

Avoid direct release of waste containing this product (effluent, solid and washing water) to the river or landfill. In case of incineration treat by the method in accordance with relevant laws such as Air Pollution Control Law using the incinerator.

Remove all the residues before disposal of the container (paper bag, drum, flexible container) of this product after use, dispose of in accordance with relevant laws and do not re-use for other usage.

14. Transportation information

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IMDG	Not restricted
ICAO-TI/ IATA-DGR	Not restricted
Transport hazard class(es)	Not restricted
UN number	Not restricted
UN proper shipping name	Not restricted
Packing group	Not restricted
Environmental hazards	Not restricted
Transport in bulk according to Annex II of MARPOL 73/78 and IBC code	Not restricted
Special safety precautions and conditions during transport	Do not handle roughly and keep dry not to break packaging bag. If the bag is broken and pellet is spilt, pay attention not to fall by slippery floor. If transported by air-conveying line take prevention measures against static discharge.

<U.S.A>

U.S. Department of Transportation(D.O.T)	Not restricted
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<Canada>

Canadian T.D.G. Information	Not restricted
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15. Regulatory information

These products are classified according to the hazard criteria of the controlled products regulation, this SDS includes all of the information that is required by the controlled products regulation.

<U.S.A>

OSHA	These products are not hazardous under 29 CFR 1910.1200.
TSCA	All components on TSCA.
40 CFR 799, Subparts B-C	Not Applicable
40 CFR 721 Subpart E	Not Applicable
40 CFR 747,749,761~3,766	Not Applicable
40 CFR 712, Subpart B	Not Applicable
40 CFR 716.120, Subpart B	Not Applicable
CERCLA/ SUPERFUND (40 CFR 117,302)	Not Applicable
SARA TITLE III	
Section 302 (40CDR355)	None
Section 311/312 (40CFR370)	Immediate(acute) health hazard : No Delayed(chronic) health hazard : No Fire hazard : No Sudden release of pressure : No Reactive : No
Section 313 (40CFR372):	None present or none present in regulated quantities.

State regulations

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For more information, please contact Asahi at the address and telephone number listed on this sheet.

Reference

- 1) Incorporated Administration Agency National Institute of Technology and Education HP(Japan), http://www.safe.nite.go.jp/ghs/ghs_download.html
- 2) ACGIH, "Guide to Occupational Exposure Value, (2016)
- 3) ACGIH, "TLVs, and BEIs® Based on the Documentation of the Threshold Values for Chemical Substances and Physical Agents & Biological Exposure Indices", (2016)
- 4) IARC Monographs (Vol. 1-95, 29 Nov. 2006)
- 5) The information from the supplier. (SDS) (revised on Dec. 21, 2015)