

AsahiKASEI

SAFETY DATA SHEET

Product name : XYRON (PS)
 SDS Ref. No.: XY-W025-1
 First Issue : May 30, 2014
 Revised Issue: Jan. 01, 2017

1. Chemical product and company identification

Product identifier used on the label

Product Name	XYRON™ P100Z, 201V, X331Z, S200Z, X8400, X8401, X8500, X8600, X8910, X1509, X301V, X1561, VM502, X301Z, X501Z, X531V, X531Z, X2215, X302V, X1764, G703V, VT302, X303Z, X503V, X1711, X1712, X1793, X533V, X533Z, X534Z, G793Z
SDS No.	XY-W025-1
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
URL	http://www.akchem.com/
Recommended use and restriction on use	
Recommended use	Plastic ingredient for home electronics, electronic materials, automotive materials, industrial materials, consumer goods. .


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Restriction on use	<p><Notice & warning concerning the use of XYRON></p> <p>Do not use XYRON for the parts below.</p> <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.</p> <p>Please contact us for detail.</p>
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2. Hazard(s) identification**Classification of the chemical****[GHS-Classification]**

Physical Hazards	Classification not possible	
Health Hazards	Classification not possible	
Environmental Hazards	Acute aquatic toxicity	Category 2
	Chronic aquatic toxicity	Category 2
Other Hazards	Non	

[GHS label element]

Symbol(s)	
Signal word	Non
Hazard Statement(s)	H401: Toxic to aquatic life H411: Toxic to aquatic life with long lasting effects
Special Hazard	<ul style="list-style-type: none"> • Gas is generated in melted condition. • Can burn in a fire.

[Precautionary statements]

Safety measures	<p>P273: Avoid release to the environment.</p> <p>P391: Collect spillage.</p> <p>P501: Dispose of contents/container in accordance with regulation and standard of regional government.</p> <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, elastomer, and triphenyl phosphate

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Product Name: P100Z, 201V, X331Z, S200Z

Components	Product Name	Contents[wt%]				CAS No.	EINECS No.
		P100Z	201V	X331Z	S200Z		
	Poly(2,6-dimethyl-1,4-phenylene ether)	30-40	30-40	40-50	50-60	25134-01-4	N/A
	Polystyrene, High Impact polystyrene	45-55	45-55	30-40	20-30	9003-53-6 and/or 9003-55-8	N/A
	Styrenic elastomer	0-3	0-3	0-3	0-3	66070-58-4 and/or Confidential	N/A
	Elastomer	0-3	0-3	0-3	0-3	Confidential	N/A
	Triphenyl phosphate	7-9	9-11	10-12	14-16	115-86-6	204-112-2
	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		

Chemical name or generic name;

Mixture of Poly (phenylene ether), styrenic resin, elastomer, triphenyl phosphate, and Inorganic filler

Product Name: X8400, X8401, X8500, X8600, X8910

Components	Product Name	Contents[wt%]					CAS No.	EINECS No.
		X8400	X8401	X8500	X8600	X8910		
	Poly(2,6-dimethyl-1,4-phenylene ether)	35-45	40-50	35-45	45-55	30-40	25134-01-4	N/A
	Polystyrene, High Impact polystyrene	20-30	5-15	20-30	20-30	35-45	9003-53-6 and/or 9003-55-8	N/A
	Styrenic resin	0-5	0-5	0-5	0-5	0-5	Confidential	N/A
	Styrenic elastomer	0-3	0-3	0-3	0-3	0-3	66070-58-4 and/or Confidential	N/A
	Triphenyl phosphate	9-11	10-12	8-10	8-10	3-5	115-86-6	204-112-2
	Inorganic filler	5-15	15-25	-	-	1-5	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
	Carbon fiber	5-15	5-15	15-25	5-15	5-15	7440-44-0	231-153-3
	Additives (Stabilizer etc.)	<3	<3	<3	<3	<3	Confidential	Registered
	Petroleum hydrocarbon oil (Mineral oil)	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	Confidential	Registered
	Colorant	0 - 6	0 - 6	0 - 6	0 - 6	0 - 6	See Appendix	See Appendix
	Total	100	100	100	100	100		

Product Name: X1509, X301V, X1561, VM502, X301Z, X501Z

Components	Product Name	Contents[wt%]						CAS No.	EINECS No.
		X1509	X301V	X1561	VM502	X301Z	X501Z		
	Poly(2,6-dimethyl-1,4-phenylene ether)							25134-01-4	N/A
	Poly(2,6-dimethyl-1,4-phenylene ether), maleated	30-40	30-40	40-50	40-50	40-50	55-65	219136-76-2	N/A
	Polystyrene, High Impact polystyrene	40-50	40-50	20-30	10-20	25-35	15-25	9003-53-6 and/or 9003-55-8	N/A
	Styrenic resin	-	-	5-15	-	-	-	Confidential	N/A
	Styrenic elastomer	0-3	0-3	0-3	5-15	3-10	0-3	66070-58-4 and/or Confidential	N/A
	Triphenyl phosphate	7-9	7-9	13-15	6-8	10-12	10-12	115-86-6	204-112-2
	Inorganic filler	5-15	5-15	5-15	5-15	5-15	5-15	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	<3	<3	Confidential	Registered

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Petroleum hydrocarbon oil (Mineral oil)	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	Confidential	Registered
Colorant	0 - 6	0 - 6	0 - 6	0 - 6	0 - 6	0 - 6	See Appendix	See Appendix
Total	100	100	100	100	100	100		

Product Name: X531V, X531Z, X2215, X302V, X1764, G703V

Components	Product Name						CAS No.	EINECS No.
	Contents[wt%]							
	X531V	X531Z	X2215	X302V	X1764	G703V		
Poly(2,6-dimethyl-1,4-phenylene ether)							25134-01-4	N/A
Poly(2,6-dimethyl-1,4-phenylene ether), maleated	55-65	55-65	35-45	25-35	30-40	35-45	219136-76-2	N/A
Polystyrene, High Impact polystyrene	10-20	15-25	30-40	35-45	10-20	15-25	9003-53-6 and/or 9003-55-8	N/A
Styrenic resin	-	-	-	-	3-10	-	Confidential	N/A
Styrenic elastomer	0-3	0-3	0-3	0-3	0-3	0-3	66070-58-4 and/or Confidential	N/A
Elastomer	-	-	-	-	-	0-3	Confidential	Confidential
Triphenyl phosphate	11-13	11-13	6-8	7-9	5-7	4-6	115-86-6	204-112-2
Inorganic filler	5-15	5-15	10-20	15-25	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	<3	<3	Confidential	Registered
Petroleum hydrocarbon oil (Mineral oil)	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	Confidential	Registered
Colorant	0 - 6	0 - 6	0 - 6	0 - 6	0 - 6	0 - 6	See Appendix	See Appendix
Total	100	100	100	100	100	100		

Product Name: VT302, X303Z, X503V, X1711, X1712, X1793

Components	Product Name						CAS No.	EINECS No.
	Contents[wt%]							
	VT302	X303Z	X503V	X1711	X1712	X1793		
Poly(2,6-dimethyl-1,4-phenylene ether)							25134-01-4	N/A
Poly(2,6-dimethyl-1,4-phenylene ether), maleated	30-40	25-35	30-40	25-35	30-40	40-50	219136-76-2	N/A
Polystyrene, High Impact polystyrene	20-30	25-35	20-30	15-25	10-20	5-15	9003-53-6 and/or 9003-55-8	N/A
Styrenic elastomer	0-3	0-3	0-3	0-3	0-3	0-3	66070-58-4 and/or Confidential	N/A
Styrenic resin	-	-	-	-	-	3-10	Confidential	N/A
Triphenyl phosphate	5-7	7-9	5-7	6-8	8-10	8-10	115-86-6	204-112-2
Inorganic filler	25-35	25-35	25-35	35-45	35-45	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	<3	<3	Confidential	Registered
Petroleum hydrocarbon oil (Mineral oil)	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	Confidential	Registered
Colorant	0 - 6	0 - 6	0 - 6	0 - 6	0 - 6	0 - 6	See Appendix	See Appendix
Total	100	100	100	100	100	100		

Product Name: X533V, X533Z, X534Z, G793Z

Components	Product Name				CAS No.	EINECS No.
	Contents[wt%]					
	X533V	X533Z	X534Z	G793Z		
Poly(2,6-dimethyl-1,4-phenylene ether)					25134-01-4	N/A
Poly(2,6-dimethyl-1,4-phenylene ether), maleated	30-40	25-35	30-40	55-65	219136-76-2	N/A
Polystyrene, High Impact polystyrene	20-30	25-35	20-30	0-3	9003-53-6 and/or 9003-55-8	N/A
Styrenic elastomer	0-3	0-3	0-3	0-3	66070-58-4 and/or Confidential	N/A
Triphenyl phosphate	5-7	7-9	5-7	7-12	115-86-6	204-112-2
Inorganic filler	25-35	25-35	25-35	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		

[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.
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.

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.

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Storage	Be stored at places where meet appropriate storage conditions as follows. <ul style="list-style-type: none"> • Store at places where are not exposed to direct sunlight. • Store to avoid the high temperature and humidity. • Store away from sources of ignition. • Take measures to prevent static electricity disaster.
Packing material	Use packing container materials suitable for storage conditions.

8. Exposure controls/personal protection

Facility measures	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	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	These products don't exhibit a sharp melting point.
Decomposition temperature	>300 deg C
Flash point	>400 deg C
Ignition point	>450 deg C

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Explosion limit Upper / lower	No data Precautionary measures for static discharge are necessary if handled as powder
Specific gravity	1.0 - 1.5
Solubility(ies)	
Water	Insoluble
Other solvent	Soluble in organic solvent (Chloroform, Toluene, Acetone (Ketones) etc)
Partition coefficient: <i>n</i> -octanol/water	No data

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**Symptoms related to the physical, chemical and toxicological characteristics**

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	Triphenyl phosphate	Petroleum hydrocarbon oil (Mineral oil)	Carbon black	Titanium oxide	Iron oxide	Classification of Products
content	≥77.5wt%	≤16wt%	0-0.5wt%	0-3wt%	0-5wt%	0-5wt%	
Acute toxicity (oral)	Classification not possible	Category 5 LD50=3500mg (Rat)	Classification not possible	Classification not possible	Classification not possible	Classification not possible	Classification not possible ¹⁾
Skin corrosion/irritation	Classification not possible	Classification not possible	Classification not possible	Classification not possible	Not classified	Category 2	Classification not possible ²⁾
Serious eye damage/eye irritation	Classification not possible	Classification not possible	Classification not possible	Classification not possible	Category 2B	Category 1	Classification not possible ³⁾
Carcinogenicity	Classification not possible	Classification not possible	Classification not possible	Classification not possible	Category 2	Not classified	Classification not possible ⁴⁾
Specific target organ toxicity - Single exposure	Classification not possible	Classification not possible	Classification not possible	Classification not possible	Classification not possible	Category 3 (respiratory tract irritation)	Classification not possible ⁵⁾
Specific target organ toxicity - Repeated exposure	Classification not possible	Classification not possible	Classification not possible	Classification not possible	Classification not possible	Category 1 (respiratory organs)	Classification not possible ⁶⁾

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Note;

- ATE of Resin is unknown, but the acute toxicity (oral) is estimated to be very low, so ATE of Resin was defined as $ATE = \infty$. As a result, the value of ATE_{mix} was more than 5000, the classification of products is specified as "Classification not possible".
- 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.
- 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.
- 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;

- The information from supplier (SDS)
- 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	Triphenyl phosphate	Petroleum hydrocarbon oil (Mineral oil)	Carbon black	Titanium oxide	Iron oxide	Classification of Products
content	≥77.5wt%	≤16wt%	0-0.5wt%	0-3wt%	0-5wt%	0-5wt%	
Hazardous to the aquatic environment (acute)	Classification not possible	Category 1 (Mysid shrimp)	Classification not possible	Classification not possible	Classification not possible	Classification not possible	Category 2
Hazardous to the aquatic environment (chronic)	Classification not possible	Category 1	Classification not possible	Classification not possible	Not classified	Category 2	Category 2

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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

<International regulations>

Transport hazard class(es)	IMDG/ICAO-TI/IATA-DGR : 9
UN number	IMDG/ICAO-TI/IATA-DGR : 3077
UN proper shipping name	IMDG/ICAO-TI/IATA-DGR : Environmentally hazardous substance, solid, n.o.s. (Triphenyl phosphate)
Packing group	IMDG/ICAO-TI/IATA-DGR : III
Environmental hazards	MARINE POLLUTANT (Triphenyl phosphate)
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)	Hazardous Materials: Triphenyl phosphate Hazardous Materials Description and Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s. Hazard Class or Division:9 Packing Group : III
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<Canada>

Canadian T.D.G. Information	See D.O.T.
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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

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CERCLA/ SUPERFUND (40 CFR 117,302)	Not Applicable															
SARA TITLE III																
Section 302 (40CFR355)	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																
California Prop 65	These products may contain the following materials.															
	<table border="1"> <thead> <tr> <th>Name</th> <th>Cas No.</th> <th>Content (wt%)</th> </tr> </thead> <tbody> <tr> <td>Toluene</td> <td>108-88-3</td> <td>0 – 0.1</td> </tr> <tr> <td>Styrene</td> <td>100-42-5</td> <td>0 – 0.1</td> </tr> <tr> <td>Carbon Black</td> <td>1333-86-4</td> <td>0 - 3</td> </tr> <tr> <td>Titanium oxide</td> <td>13463-67-7</td> <td>0 - 5</td> </tr> </tbody> </table>	Name	Cas No.	Content (wt%)	Toluene	108-88-3	0 – 0.1	Styrene	100-42-5	0 – 0.1	Carbon Black	1333-86-4	0 - 3	Titanium oxide	13463-67-7	0 - 5
Name	Cas No.	Content (wt%)														
Toluene	108-88-3	0 – 0.1														
Styrene	100-42-5	0 – 0.1														
Carbon Black	1333-86-4	0 - 3														
Titanium oxide	13463-67-7	0 - 5														
Note ; Refer to any other federal, state and local regulations.																
Canada																
WHMIS	Not Applicable															
EU																
1272/2008 Annex VI Table-3.1	Not listed															
1272/2008 Table-3.2	Not listed															
REACH SVHC	None present or none present in regulated quantities.															
REACH Annex XIV	None present or none present in regulated quantities.															
REACH Annex XVII	None present or none present in regulated quantities.															
DIRECTIVE 2011/37/EU (ELV)	None present or none present in regulated quantities.															
DIRECTIVE 2011/65/EU (RoHS)	None present or none present in regulated quantities.															
China																
Limited toxic chemical sub- stances for export	None															
Prohibited cargo list for import and export	None															
General rule for classification and hazard communication of Chemicals (GB.13690)	None present or none present in regulated quantities.															
List of Dangerous Goods	None present or none present in regulated quantities.															
List of Hazardous Chemicals	None present or none present in regulated quantities.															
Korea																
Prohibited or regulated toxic substances	None															
Toxic substances	None present or none present in regulated quantities.															
Observed substances	None present or none present in regulated quantities.															

16. Other information, including date of preparation or last revision

Update history:

Date of issue: May 30, 2014

AsahiKASEI

SAFETY DATA SHEET

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SDS Ref. No.: XY-W025-1
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Revised Issue: Jan. 01, 2017

Date of revision: Jan. 01, 2017

Hazard statements and risk phrases of ingredient(s) which do not appear elsewhere in this SDS

These products are used only for raw material of XYRON compound.

Use is prohibited to other usages.

Refer to "XYRON Technical information" for additional guidance and information.

Note;

The information furnished in this Safety Data Sheet is accurate to the best knowledge of ASAHI KASEI CORPORATION ("Asahi") as of the date of its publication.

This SDS is not intended to create any liability of any kind on the part of Asahi.

In no event will Asahi be responsible for any death, injury or damage of any nature resulting from the use of, reliance upon, or misuse of the SDS or material to which it refers.

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Responsibility for compliance with applicable national or local regulations concerning dissemination of the SDS and sale and use of the material to which it refers rests solely upon the purchaser.

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 21 Dec., 2015)