SAFETY DATA SHEET

1. Chemical product and company identification

Product name **Multilon® TN-3812BW**
SDS Number TN3812BW-JpE
Version number 01
Issue date 04-01-2013
Revision date -
Company name TEIJIN Limited.
Address 2-1, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo 100-8585, Japan
Division Environment Quality Assurance Department, Resin & Plastic Processing BU
Telephone number +81 3-3506-4717
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Recommended use of the chemical and restrictions on use
Intended use Molding material for industry use

2. Hazards identification

GHS-classification The product is not classified according to GHS.
GHS label elements None.
Precautionary statement None.
National/local information See section 15 for regulatory information.

3. Composition/information on ingredients

Substance or Mixture Mixture

		Gazette notification		
Components	**CAS #**	**ENCS no.**	**ISHL no.**	**Concentration (%)**
Polycarbonate resin	25971-63-5	(7)-738	(7)-738	60 – 70
Acrylonitrile butadiene styrene resin	9003-56-9	(6)-176	(6)-176	10 – 20
Talc	14807-96-6	(1)-468	(1)-468	=< 15
Triphenyl phosphate	115-86-6	(3)-2522	(3)-2522	9
Modifier	Proprietary	Proprietary	Proprietary	=< 10

Chemical formula: (C15H16O2.CCl2O)x (25971-63-5), (C8H8.C4H6.C3H3N)x (9003-56-9), H2-O3-Si 3/4Mg (14807-96-6), C18-H15-O4-P (115-86-6)

Composition comments Triphenyl phosphate is classified as GHS hazardous to the aquatic environment (acute and chronic) category 1. However, because the test result on a similar product showed low water extractivity of triphenyl phosphate (OECD GUIDELINE FOR TESTING OF CHEMICALS 120), the bioavailability of triphenyl phosphate in this product is expected to be low and the environmental hazard of the product is considered to be low.

4. First aid measures

If inhaled In case of inhalation of dusts or fumes from heated product: Move injured person into fresh air and keep person calm under observation. Get medical attention if any discomfort continues.
If on skin Rinse with water. Get medical attention promptly if symptoms persist or occur after washing. If burned by contact with hot material, cool molten material adhering to skin as quickly as possible with water, and see a physician for removal of adhering material and treatment of burn.
If in eyes Dust in the eyes: Do not rub eyes. Flush thoroughly with water. If irritation occurs, get medical assistance.
If swallowed Rinse mouth thoroughly. Large quantities: Get medical attention if symptoms occur.
Expected acute and delayed Symptoms Talc may have effects on the lungs, resulting in talc pneumoconiosis.
Protection of first-aid responders First aid personnel must be aware of own risk during rescue.
Notes to physician Treat symptomatically.

5. Fire-fighting measures

Extinguishing media	Extinguish with foam, carbon dioxide, dry powder or water fog.
Extinguishing media to avoid	None.
Specific hazards	During fire, gases hazardous to health may be formed.
Special fire fighting procedures	Use standard firefighting procedures and consider the hazards of other involved materials.
Protection of fire-fighters	Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

6. Accidental release measures

Personal precautions, protective equipment and emergency measures	Avoid inhalation of dust. See Section 8 of the SDS for Personal Protective Equipment.
Environmental precautions	Do not allow to enter drains, sewers or watercourses.
Clean-up methods and materials and containment measures	Collect and dispose of spillage as indicated in Section 13 of the SDS.

7. Handling and storage

Handling

Technical measures	Use explosion-proof electrical equipment if airborne dust levels are high.
Local and general ventilation	Provide adequate ventilation.
Precautions	Use work methods which minimize dust production. Wear appropriate personal protective equipment.
Safe handling advice	Avoid inhalation of dust. Avoid prolonged or repeated contact with skin. Avoid vapors from heated materials to prevent exposure to potentially toxic/irritating fumes.

Storage

Technical measures	Avoid dust formation.
Suitable storage conditions	Store in closed original container in a dry place.
Safe packaging materials	Keep in original container.

8. Exposure controls/personal protection

Occupational exposure limits

Japan. OELs - JSOH. (Japan Society of Occupational Health: Advisory Opinion on Permissible [Exposure] Limits)

Components	Type	Value	Form
Talc (14807-96-6)	TWA	2 mg/m3	Total dust.
		0.5 mg/m3	Respirable dust.

US. ACGIH Threshold Limit Values

Components	Type	Value	
Talc (14807-96-6)	TWA	2 mg/m3	Respirable fraction.
Triphenyl phosphate (CAS 115-86-6)	TWA	3 mg/m3	

Engineering measures	Provide adequate ventilation. Observe occupational exposure limits and minimize the risk of inhalation of dust and fumes.

Personal protective equipment

Respiratory protection	Wear respirator if there is dust formation. When the product is heated, use suitable respiratory equipment with gas filter for organic gas.
Hand protection	For prolonged or repeated skin contact use suitable protective gloves. When material is heated, wear gloves to protect against thermal burns.
Eye protection	Use tight fitting goggles if dust is generated. If contact with hot material may occur, safety glasses and face shield are recommended.
Skin and body protection	No protection is ordinarily required under normal conditions of use.
Hygiene measures	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state	Solid.

Form	Pellets.
Color	Natural.
Odor	None.
pH	Not applicable.
Melting point/Freezing point	Not available.
Boiling point, initial boiling point, and boiling range	Not applicable.
Flash point	Not available.
Auto-ignition temperature	Not available.
Combustion characteristics (solid, gas)	Not available.
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Specific gravity	1.25
Solubility	Insoluble in water
Partition coefficient (n-octanol/water)	Not available.
Decomposition temperature	Not available.

10. Stability and reactivity

Stability	Stable under normal temperature conditions.
Possibility of hazardous reactions	Will not occur.
Conditions to avoid	None known.
Incompatible materials	No data available.
Hazardous decomposition products	During combustion: Carbon monoxide. Carbon Dioxide. Acrylonitrile. Hydrogen cyanide. Nitrogen oxides (NOx). Phosphoric acid.

11. Toxicological information

Acute toxicity May cause discomfort if swallowed.

Components	Test Results
Triphenyl phosphate (CAS 115-86-6)	Acute Dermal LD50 Rabbit: > 7.9 g/kg
	Acute Oral LD50 Guinea pig: > 4000 mg/kg
	Acute Oral LD50 Rat: 3500 mg/kg

Skin corrosion/irritation	Dust may irritate skin.
Serious eye damage/eye irritation	Dust in the eyes will cause irritation. May cause redness and pain.
Respiratory sensitizer	None known.
Skin sensitizer	None known.
Germ cell mutagenicity	None known.
Carcinogenicity	Not classified.

IARC Monographs. Overall Evaluation of Carcinogenicity

Acrylonitrile butadiene styrene resin (CAS 9003-56-9)	3	Not classifiable as to carcinogenicity to humans.

ACGIH Carcinogens

Talc (CAS 14807-96-6)	A4	Not classifiable as a human carcinogen.
Triphenyl phosphate (CAS 115-86-6)	A4	Not classifiable as a human carcinogen.

Toxic to reproduction	None known.
Specific target organ toxicity - single exposure	None known.
Specific target organ toxicity - repeated exposure	None known.

12. Ecological information

Ecotoxicological data

Components		Species	Test Results
Triphenyl phosphate (CAS 115-86-6)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	0.86 - 1.2 mg/l, 48 Hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.3 mg/l, 96 Hours
		Fathead minnow (Pimephales promelas)	0.87 mg/l, 96 Hours

Ecotoxicity Triphenyl phosphate is classified as GHS hazardous to the aquatic environment (acute and chronic) category 1. However, because the test result on a similar product showed low water extractivity of triphenyl phosphate (OECD GUIDELINE FOR TESTING OF CHEMICALS 120), the bioavailability of triphenyl phosphate in this product is expected to be low and the environmental hazard of the product is considered to be low.

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence/degradability None known.

Bioaccumulation None known.

Mobility in soil The product is insoluble in water and will sediment in water systems.

Other hazardous effects None known.

13. Disposal considerations

Residual waste Dispose of waste at a facility with special permission to dispose industrial wastes. Waste should be accompanied by a manifest for the industrial waste. Dispose of in accordance with local regulations. Do not discharge into rivers, lakes, mountains, etc. because the product may affect the environment.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

International regulations Not regulated as dangerous under UN transport regulation.

IATA Not regulated as dangerous goods.

IMDG Not regulated as dangerous goods.

15. Regulatory information

Industrial Safety and Health Act

Specified substances regulation Not regulated.

Organic solvents regulation Not regulated.

Notifiable substances Triphenylphosphate 9 %

Labeling substances Not regulated.

Poisonous and Deleterious Substances Control Act Not regulated.

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.

Class I specified chemical substances Not regulated.

Class II specified chemical substances Not regulated.

Monitoring chemical substances Not regulated.

Law concerning Pollutant Release and Transfer Register

Specified class 1 substances (substance name, ordinance number and content)

Not regulated.

Class 1 substances (substance name, ordinance number and content)

Triphenylphosphate Ordinance No. 461 9 %

Class 2 substances (substance name, ordinance number and content)

Not regulated.

Fire Service Act Not dangerous goods under Fire Service Law

Ship Safety Law, Dangerous Goods Marine Transport and Storage Rule

Not regulated.

Air Law, Enforcement Rule Not regulated.

Explosives Control Act Not regulated.

High Pressure Gas Safety Act	Not regulated.
Act on Prevention of Marine Pollution and Maritime Disaster	Not regulated.
Water Pollution Control Act	PHOSPHORUS

16. Other information

The information about colorant is not contained in this SDS.

This information is provided without warranty. The information is believed to be correct. The precautions in this SDS are intended for normal use. Please take safety measures appropriate to the use and the application when handling the product in a special way. This information should be used to make an independent determination of the methods to safeguard workers and the environment.