

MATERIAL SAFETY DATA SHEET
Antioxidant 412s

1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE

1.1 Product identifiers

Product Name	Pentaerythrityl Tetrakis (3-laurylthiopropionate)
CAS No.	29598-76-3

1.2 Relevant identified uses of the substance or mixture and uses advised against.

Identified uses

1. It can be used for long-term, high temperature polypropylene, polyethylene, acrylonitril e-butadiene-acrylate, polystyrene and other engineering thermoplastic applications.
2. It is suitable for the protection of various polymers, such as low density polyethylene and high density polyethylene, polybutylene terephthalate, polycarbonate, polyphenylene oxide, polyamide, polyurethane and polystyrene, also used in latex form.
3. It is used in combination with hindered phenolic antioxidants to achieve synergistic Performance.

1.3 Details of the supplier of the safety data sheet.

COMPANY	Dongguan Baoxu Chemical Technology.,ltd. Caijin Business Bldg DongGuan CN 523071 +86 0769 22821082 Fax 86 0769 22821083 www.additivesforpolymer.com info@additivesforpolymer.com
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2 HAZARDS IDENTIFICATION.

2.1 Classification of the substance or mixture.

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP].

The substance is not classified according to the Globally Harmonized System (GHS).

Classification according to EU Directives 67/548/EEC or 1999/45/EC.

This substance is not classified according to Directive 67/548/EEC.

2.2 Label elements

The product does not require a hazard warning label in accordance with GHS criteria.

2.3 Other hazards

None.

3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Molecular Formula	C65H124O8S4
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Molecular Weight	1162 g/mol.
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Component

Concentration.

Pentaerythrityl Tetrakis (3-	Min. 98.0 %(Other impurities & unreacted
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CAS- No.	29598-76-3
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EC-No.	249-720-9
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4 FIRST AID MEASURES

4.1 Description of first aid measures.

General advice.

Take affected persons out of danger area and lay down.

If inhaled

Supply fresh air; consult doctor in case of

In case of skin contact

Immediately wash with water and soap and rinse

In case of eye contact

Rinse opened eye for several minutes under

4.2 Most important symptoms and effects, both acute and delayed.

No data available.

4.3 Indication of any immediate medical attention and special treatment needed.

If symptoms persist consult doctor.

- 5 **FIREFIGHTING MEASURES.**
- 5.1 **Extinguishing media.**
Suitable extinguishing media CO₂, extinguishing powder or water spray. Fight large fires with water spray or alcohol resistant foam. Use firefighting measures that suit the environment.
- 5.2 **Special hazards arising from the substance or mixture** Carbon monoxide (CO)
- 5.3 **Advice for fire-fighters** Wear self-contained respiratory protective device.
- 5.4 **Further information** Collect contaminated fire fighting water separately. must not enter the sewage system.
- 6 **ACCIDENTAL RELEASE MEASURES.**
- 6.1 **Personal precautions, protective equipment and emergency procedures.**
 Ensure adequate ventilation. Wear protective clothing. Avoid formation of dust. Keep away from
- 6.2 **Environmental precautions.**
 Do not allow product to reach sewage system or any water course.
- 6.3 **Methods and materials for containment and cleaning up.**
 Pick up mechanically. Dispose of the collected material according to regulations.
- 6.4 **Reference to other sections.**
 No dangerous substances are released.
- 7 **HANDLING AND STORAGE**
- 7.1 **Precautions for safe handling.**
 Prevent formation of dust. Any deposit of dust which cannot be avoided must be regularly removed. Ensure good ventilation/exhaustion at the workplace.
- 7.2 **Information about protection against explosions and fires:**
 Dust can combine with air to form an explosive mixture. Keep ignition sources away - Do not smoke. Protect against electrostatic charges.
- 7.3 **Conditions for safe storage, including any incompatibilities**
 Store only in the original receptacle.
- 8 **Specific end users-**
 A part from the uses mentioned in section 1.2 no other specific uses are stipulated.
- EXPOSURE CONTROLS/PERSONAL PROTECTION.**
- 8.1 **Control parameters.**
Components with workplace control parameter.
- 8.2 **Exposure control.**
Appropriate engineering controls.
 No data available.
Personal protective equipment.
Eye/face protection.
 Safety glasses
Hands protection.
 The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of
- Body Protection.**
 Body protection must be chosen based on level of activity and exposure.
Respiratory Protection.
 Protective work clothing
General safety and hygiene measures:
 Wear protective clothing as necessary to minimize contact. Handle in accordance with good industrial hygiene and safety practice. Handle in accordance with good industrial hygiene and
- 9 **PHYSICAL AND CHEMICAL PROPERTIES**
Information on basic physical and chemical properties

a)	Appearance	Form: crystalline powder. Colour: White.
b)	Odour	Sweetish.
c)	Odour Threshold	No data available.
d)	pH	< 1.0 mg KOH/g.
e)	Melting point/freezing range	46.0 - 54 °C
f)	Initial boiling point and boiling range	No data available.
g)	Flash point	250°C (482 °F)
h)	Evaporation rate	No data available.
i)	Flammability (solid, gas)	Product is not flammable.
i)	Upper/lower flammability or explosive	No data available.
k)	Vapour pressure	133 hPa (100 mm Hg).
l)	Vapour density	No data available.
m)	Relative density	133 hPa (100 mm Hg).
n)	Water solubility	< 0.01
o)	Partition coefficient: octanol / water	No data available.
p)	Auto ignition temperature	No data available.
q)	Decomposition temperature	No data available.
r)	Viscosity	No data available.
s)	Explosive properties	No data available.
t)	Oxidizing properties	No data available.
9.2	Other safety information	
	SMILES	<chem>O=C(OCC(COC(=O)CCSCCCCCCCCCCCC)(CO</chem> <chem>C(=O)C</chem> <chem>CSCCCCCCCCCCCC)C</chem> <chem>O</chem> <chem>C(=</chem> <chem>O)CCCCCCCCCCCCC</chem>
	Inch-I	1S/C65H124O8S4/c1-5-9-13-17-21-25-29- 33-37-41-49- 74-53-45-61 (66)70-57-65(58- 71 -62(67)46-54-75-50-42- 38-34-30-26-22- 18-14-10-6-2,59-72-63(68)47-55-76-51- 43-
10	STABILITY AND REACTIVITY	
10.1	Reactivity	No data available.
10.2	Chemical stability	No data available.
10.3	Possibility of hazardous reactions	No data available.
10.4	Conditions to avoid	No data available.
10.5	Incompatible materials	No data available.
10.6	Hazardous decomposition products	No dangerous decomposition products known.
	Thermal decomposition:	No decomposition if used according to
11	TOXICOLOGICAL INFORMATION.	
11.1	Information on toxicological effects.	
	Acute toxicity	
	Oral	LD50 > 15000 mg/kg (Rat).
	Skin corrosion/irritation	No data available.
	Serious eye damage/eye irritation	No data available.
	Respiratory or skin sensitization	No data available.
	Germ cell mutagenicity	No data available.
	Carcinogenicity	No data available.
	Reproductive toxicity	No data available.
	Symptoms of Exposure	

	Specific target organ toxicity - single	No data available.		
	Specific target organ toxicity - repeated exposure	No data available.		
	Aspiration hazard	No data available.		
	Potential health effects			
	Skin	No irritant effect.		
	Eyes	No irritant effect.		
	Additional Information	No data available.		
	RTECS	No data available.		
12	ECOLOGICAL INFORMATION			
12.1	Toxicity			
	Aquatic toxicity:	No further relevant information available.		
12.2	Persistence and degradability	No data available.		
12.3	Bio accumulative potential	No further relevant information available.		
12.4	Mobility in soil	No data available.		
12.5	Results of PBT and vPvB assessment	No data available.		
12.6	Other adverse effects.	Generally not hazardous for water		
13	DISPOSAL CONSIDERATIONS.			
13.1	Waste treatment methods.			
	Product	Must be specially treated adhering to official regulations.		
	Contaminated packaging	Disposal must be made according to official regulations.		
14	TRANSPORT INFORMATION.			
14.1	UN number			
	ADR/RID	IMDG	IATA	
	Not classified	Not classified	Not classified	
14.2	UN proper shipping name			
	ADR/RID	IMDG	IATA	
	Not classified	Not classified	Not classified	
14.3	Transport hazard class(es)			
	ADR/RID	IMDG	IATA	
	Not classified	Not classified	Not classified	
14.4	Packaging group			
	ADR/RID	IMDG	IATA	
	Not classified	Not classified	Not classified	
14.5	Environmental hazards			
14.6	Special precautions for user	No data available.		
15	REGULATORY INFORMATION			
	Federal Regulations	No data available.		
15.1	Safety, health and environmental regulations/legislation specific for the substance or	Not listed		
15.2	Chemical Safety Assessment	No data available.		
16	OTHER INFORMATION			
	Further information.			

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