Seeflex 040E & 020E

1. IDENTIFICATION OF THE SUBSTANCE & DATA SHEET SUPPLIER:

Product Name: Seeflex 040E & 020E
Material Number: 10105 (040E) & 10106 (020E)
Chemical Family: Aromatic thermoplastic polyurethane
Chemical Name: Polyurethane elastomer
Supplier: BFM® Global Ltd
P O Box 66-087, Beachhaven, Auckland 0749, New Zealand

2. HAZARDS IDENTIFICATION:

2.1 Classification of the substance or mixture

GHS Classification:
Non-hazardous substance according to GHS classification

2.2 Label elements
GHS-Labelling
Non-hazardous substance according to GHS classification

2.3 Other hazards
No information available.

3. COMPOSITION/ INFORMATION ON INGREDIENTS:

Type of product: Mixture

3.2 Mixtures
Thermoplastic polyurethane

No dangerous ingredients according to REACH-Regulation (EC) No. 1907/2006.

Candidate List of Substances of Very High Concern for Authorisation
This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

4. FIRST AID MEASURES:

4.1 Description of first aid measures

In case of skin contact: CONTACT WITH THE HOT MELT: Cool immediately with plenty of water. Do not remove product crusts which may have formed neither forcibly nor by applying any solvents to the skin involved. To obtain treatment for possible burns, and appropriate skin care, seek medical advice immediately.

The following information refers to the handling of the product at room temperature. In case of skin contact wash affected areas thoroughly with soap and plenty of water.

4.2 Most important symptoms and effects, both acute and delayed
Notes to physician: No information available.

4.3 Indication of any immediate medical attention and special treatment needed
Therapeutic measures: No information available.

5. FIRE-FIGHTING MEASURES:

5.1 Extinguishing media
Suitable extinguishing media: Water, Foam, Dry chemical

5.2 Special hazards arising from the substance or mixture
Burning releases carbon monoxide, carbon dioxide, oxides of nitrogen and traces of hydrogen cyanide. In the event of fire and/or explosion do not breathe fumes.

5.3 Advice for fire-fighters
Firemen must wear self-contained breathing apparatus.

Do not allow contaminated extinguishing water to enter the soil, ground-water or surface waters.

6. ACCIDENTAL RELEASE MEASURES:

6.1 Personal precautions, protective equipment and emergency procedures
Put on protective equipment (see section 8). Ensure adequate ventilation/exhaust extraction. Keep unauthorized persons away.

6.2 Environment related measures
Do not flush into surface water or sanitary sewer system.

6.3 Methods and material for containment and cleaning up
Use mechanical handling equipment. Avoid dust formation. Sweep up and shovel into suitable containers for disposal.

6.4 Reference to other sections
For further disposal measures see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Provided good ventilation and/or local exhaust systems are used, the Workplace Exposure Limit(s) stated in section 8 should not be exceeded. In case of mechanical processing, dust must be removed by effective exhaust ventilation.

Keep away from foodstuffs, drinks and tobacco. Wash hands and face before breaks and at the end of work. Keep working clothes separately. Change contaminated clothing.

7.2 Conditions for safe storage, including any incompatibilities
Keep in a dry room away from UV light..

Storage class (TRGS 510) : 11: Combustible Solids
Storage temperature: < 40 °C

7.3 Specific end use(s)
No information available.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION:

8.1 Control parameters
The regulations for the substances listed below must be observed when processing this product, particularly if processing takes place at elevated temperatures. In our experience the provision of effective fresh-air and exhaust ventilation equipment at the points where vapors may be generated will ensure compliance with the tolerance limits quoted below.

SUBSTANCE	CAS-NO.	BASIS	TYPE	VALUE	CEILING LIMIT VALUE	REMARKS
General limiting value of dust		TRGS 900		10 mg/m³	2	inhalable fraction
General limiting value of dust		TRGS 900		3 mg/m³	2	alveolar fraction
General limiting value of dust		TRGS 900	STEL CL			Category II: substances with a resorptive effect.

8.2 Exposure controls

Respiratory protection
In case of dust formation use respiratory equipment with filter type particle filter P1 according to EN 143.

Hand protection
Suitable materials for safety gloves; EN 374:
Polyvinyl chloride - PVC (>= 0.5 mm)
Contaminated and/or damaged gloves must be changed.

Eye protection
Wear eye/face protection.

Skin and body protection
Wear suitable protective clothing.

Further protective measures
Do not breathe dust/vapor. Grease skin.

9. PHYSICAL AND CHEMICAL PROPERTIES:

9.1 Information on basic physical and chemical properties

Appearance:	granular
Colour:	different according to colouration
Odour:	almost odourless
pH:	not applicable
Softening point:	> 120 °C
Upper/lower flammability or explosive limits:	not applicable
Vapour pressure:	not applicable
Density:	ca. 1,2 g/cm³
Bulk density:	500 - 700 kg/m³
Water solubility:	practically insoluble
Auto-ignition temperature:	not applicable
Ignition temperature:	> 210 °C
Viscosity, dynamic:	not applicable

9.2 Other information
The indicated values do not necessarily correspond to the product specification. Please refer to the product information sheet or the technical information sheet for specification data.

10. STABILITY AND REACTIVITY:

10.1 Reactivity
This information is not available.

10.2 Chemical stability
Decomposition begins at 230 °C.

10.3 Possibility of hazardous reactions
No hazardous reactions observed.

10.4 Conditions to avoid
This information is not available.

10.5 Incompatible materials
This information is not available.

10.6 Hazardous decomposition products
Smouldering or incomplete combustion leads to the formation of toxic gas mixtures consisting mainly of CO, CO2 and nitrogen oxides.

Under recommended processing conditions small amounts of isocyanates may be emitted. Exceeding the recommended processing temperatures leads to a significant increase in the amount of isocyanate vapor generated.

Over-exposure entails a risk of concentration-dependent inhalatory irritation and/or sensitization by isocyanates (delayed appearance of difficult breathing, coughing, asthma is possible).

The regulations for the substances listed below must be observed when processing this product, particularly if processing takes place at elevated temperatures.

Isocyanates (all, as -NCO)

11. TOXICOLOGICAL INFORMATION:

Toxicological studies on the product are not yet available.

Please find below the data available to us:

11.1 Information on toxicological effects

Acute toxicity, oral
Thermoplastic polyurethane
LD50 rat: > 5.000 mg/kg
Method: OECD Test Guideline 423
Studies of a comparable product.

Acute toxicity, dermal
Thermoplastic polyurethane
LD50 rat: > 2.000 mg/kg
Studies of a comparable product.

Acute toxicity, inhalation
Thermoplastic polyurethane
Assessment: The substance or mixture has no acute inhalation toxicity Studies of a comparable product.

Primary skin irritation
Thermoplastic polyurethane
Species: rabbit
Result: non-irritant
Classification: No skin irritation
Method: OECD Test Guideline 404
Studies of a comparable product.

Primary mucosae irritation
Thermoplastic polyurethane
Species: rabbit
Result: non-irritant
Classification: No eye irritation
Studies of a comparable product.

Sensitisation
Thermoplastic polyurethane
Skin sensitisation according to Magnusson/Kligmann (maximizing test):
Species: Guinea pig
Result: negative
Classification: Does not cause skin sensitization.
Method: OECD Test Guideline 406
Studies of a comparable product.

Subacute, subchronic and prolonged toxicity
Thermoplastic polyurethane
No data available.

Carcinogenicity
Thermoplastic polyurethane
No data available.

Reproductive toxicity/Fertility
Thermoplastic polyurethane
No data available.

Reproductive toxicity/Teratogenicity
Thermoplastic polyurethane
No data available.

Genotoxicity in vitro
Thermoplastic polyurethane
Test type: Salmonella/microsome test (Ames test)
Result: No indication of mutagenic effects.
Method: OECD Test Guideline 471
Studies of a comparable product.

Genotoxicity in vivo
Thermoplastic polyurethane
No data available.

STOT evaluation – one-time exposure
Thermoplastic polyurethane
Based on available data, the classification criteria are not met.

STOT evaluation – repeated exposure
Thermoplastic polyurethane
no data available

Aspiration toxicity
Thermoplastic polyurethane
No data available.

CMR Assessment
Thermoplastic polyurethane
Carcinogenicity: No data available.
Mutagenicity: Based on available data, the classification criteria are not met.
Teratogenicity: No data available.
Reproductive toxicity/Fertility: No data available.

12. ECOLOGICAL INFORMATION:

Ecotoxicological studies of the product are not available.

Do not allow to escape into waterways, wastewater or soil.

Please find below the data available to us:

12.1 Toxicity

Acute Fish toxicity
Thermoplastic polyurethane
EC50 > 100 mg/l
Species: Danio rerio (zebra fish)
Exposure duration: 96 h
Method: Tested according to Directive 92/69/EEC.
Studies of a comparable product.

Chronic Fish toxicity
Thermoplastic polyurethane
No data available.

Acute toxicity for daphnia
Thermoplastic polyurethane
EC50 > 100 mg/l

Species: Daphnia magna (Water flea)
Exposure duration: 48 h
Method: Tested according to Directive 92/69/EEC.
Studies of a comparable product.

Chronic toxicity to daphnia
Thermoplastic polyurethane
No data available.

Acute toxicity for algae
Thermoplastic polyurethane
Endpoint: Growth inhibition
Species: scenedesmus subspicatus
Exposure duration: 72 h
Method: OECD Test Guideline 201
No toxic effects with saturated solution.
Studies of a comparable product.

Acute bacterial toxicity
Thermoplastic polyurethane
EC50 > 10.000 mg/l
Test type: Respiration inhibition
Species: activated sludge
Exposure duration: 3 h
Method: OECD Test Guideline 209
Studies of a comparable product.

12.2 Persistence and degradability

Biodegradability
Thermoplastic polyurethane
Biodegradation: 1%, 28 d, i.e. not readily degradable
Method: Tested according to Directive 92/69/EEC.
Studies of a comparable product.

12.3 Bioaccumulative potential
No data 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
The product does not add to the AOX-value of effluent water (DIN 38409).

13. DISPOSAL CONSIDERATIONS:

Dispose in accordance with applicable international, national and local laws, ordinances and statutes. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

13.1 Waste treatment methods
After containers have been emptied as thoroughly as possible (e.g. by pouring, scraping or draining until "drip-dry"), they can be sent to an appropriate collection point set up within the framework of the existing take-back scheme of the chemical industry. Containers must be recycled in compliance with national legislation and environmental regulations.
The product is suitable for mechanical recycling. After appropriate treatment it can be remelted and reprocessed into new moulded articles. Mechanical recycling is only possible if the material has been selectively retrieved and carefully segregated according to type.

14. TRANSPORT INFORMATION:

ADR/RID

14.1 UN number	: Not dangerous goods
14.2 UN proper shipping name	: Not dangerous goods
14.3 Transport hazard class(es)	: Not dangerous goods
14.4 Packing group	: Not dangerous goods
14.5 Environmental hazards	: Not dangerous goods

ADN

14.1 UN number	: Not dangerous goods
14.2 UN proper shipping name	: Not dangerous goods
14.3 Transport hazard class(es)	: Not dangerous goods
14.4 Packing group	: Not dangerous goods
14.5 Environmental hazards	: Not dangerous goods

IATA

14.1 UN number	: Not dangerous goods
14.2 UN proper shipping name	: Not dangerous goods
14.3 Transport hazard class(es)	: Not dangerous goods
14.4 Packing group	: Not dangerous goods
14.5 Environmental hazards	: Not dangerous goods

IMDG

14.1 UN number	: Not dangerous goods
14.2 UN proper shipping name	: Not dangerous goods
14.3 Transport hazard class(es)	: Not dangerous goods
14.4 Packing group	: Not dangerous goods
14.5 Environmental hazards	: Not dangerous goods

14.6 Special precautions for user

See section 6 - 8.

Additional information : Not dangerous cargo.
Slight smell. Keep dry.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable.

15. REGULATORY INFORMATION:

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Water contaminating class (Germany)
nw not water endangering
(in accordance with Annex 1 to the Directive on Water-Hazardous Substances)

15.2 Chemical Safety Assessment
A Chemical Safety Assessment has not been conducted for this substance / mixture resp. its components.

16. OTHER INFORMATION:

Further information
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.